



PERIPHERAL BLOOD CELL MARKERS USEFUL FOR DIAGNOSING MULTIPLE SCLEROSIS AND METHODS AND KITS UTILIZING SAME

FIELD AND BACKGROUND OF THE INVENTION

5 The present invention relates generally to the field of diagnosis, treatment assessment and prognosis. More specifically, the present invention relates to peripheral blood cell expressed markers and kits and methods utilizing same for diagnosing, treating and assessing the state of multiple sclerosis (MS) in an individual. The present invention also provides cellular
10 markers which are useful in distinguishing between different clinical courses of MS e.g.: probable, relapsing-remitting, secondary progressive or primary progressive as well as response to the therapy.

 Multiple sclerosis is an autoimmune neurodegenerative disease, which is marked by inflammation within the central nervous system with lymphocyte
15 attack against myelin produced by oligodendrocytes, plaque formation and demyelization with destruction of the myelin sheath of axons in the brain and spinal cord, leading to significant neurological disability over time. The disease frequently occurs in young adults between 20-40 years of age, is more prevalent in females than males (2:1), and has a characteristic geographical
20 distribution – estimated prevalence in USA 120/100,000, (250,000 to 350,000 cases).

 The annual cost of MS in USA was estimated about \$34,000 per person, \$2.2 million total lifetime cost per case or \$6.8 billion yearly, in a conservative estimate of a national annual cost (Anderson DW, 1992; Whetten-Goldstain K.,
25 1998).

Clinical Diagnosis and Evaluation of Stages of MS

 Typically, at onset an otherwise healthy person presents with the acute or sub acute onset of neurological symptomatology (attack) manifested by unilateral loss of vision, vertigo, ataxia, dyscoordination, gait difficulties,

sensory impairment characterized by paresthesia, dysesthesia, sensory loss, urinary disturbances until incontinence, diplopia, dysarthria or various degrees of motor weakness until paralysis. The symptoms are usually painless, remain for several days to a few weeks, and then partially or completely resolve. After
5 a period of remission, a second attack will occur. During this period after the first attack, the patient is defined to suffer from probable MS. Probable MS patients may remain undiagnosed for years. When the second attack occurs the diagnosis of clinically definite MS (CDMS) is made (Poser criteria 1983; C.M. Poser et al., Ann. Neurol. 1983;13, 227).

10 The clinical disease courses of MS are relapsing-remitting, primary or secondary progressive (Abramsky, 1997; Russell, 1998).

The relapsing-remitting course of MS (85% of patients) is characterized by acute attacks or relapses during which new neurological symptoms and signs appear, or worsen. Relapse develops within a period of several days, lasts for 6-
15 8 weeks, than gradually resolves. During the acute relapse scattered inflammatory and demyelinating central nervous system (CNS) lesions produce varying combinations of motor, sensory, coordination, visual, and cognitive impairments, as well as symptoms of fatigue and urinary tract dysfunction. The outcome of a relapse is unpredictable in terms of neurological sequel but it is
20 well established that with additional relapses, the probability of complete clinical remission decreases and neurological disability and handicap may develop. On average, about 60% of patients remain fully functional 10 years after the primary attack, and 25 to 30% remain fully functional 30 years after onset. Statistically, the disease does not greatly decrease life expectancy (mean
25 decrease 12 years), although some patients become severely disabled and die from recurrent infections and complications.

Primary progressive MS (10% of patients) is characterized by slow, progressive neurological dysfunction usually in the form of a gradual

myelopathy causing spasticity and ataxia. Treatment regimen varies greatly with different clinical course and severity of the disease.

The diagnosis of MS is still defined primary by clinical terms and relies on a combination of history, neurological examination and ancillary laboratory
5 and neuro-imaging studies.

Laboratory tests for MS include: 1) CSF evaluation of IgG synthesis, oligoclonal bands; 2) MRI of the brain and spinal cord and; 3) exclusion of other autoimmune diseases by blood tests [e.g.,; serum B12 level; HTLV 1 or HIV 1 titers; sedimentation rate or C-reactive protein; RA latex (Rheumatoid
10 arthritis); ANA, anti-DNA antibodies (systemic lupus erythematosus)]. However, accurate diagnosis and prognosis in the “probable” stage, and early relapsing-remitting stages remains problematic. For example, it has been shown that positive MRI findings in the first demyelinating attack only provide a 50% successful prediction of development of clinically definite MS within 2-
15 3 years (CHAMPS Study Group, Neurology 2002;59:998-1005). Likewise, Villar et al (Neurology 2002;59:877-83) found that detection of oligoclonal IgM bands with early symptoms were only partially predictive of development of clinically definite MS.

Other laboratory tests may provide some additional support for the
20 diagnosis, but evidence of lesions disseminated in time and space remains a cardinal element of the diagnosis (Poser CM., 2001). In absence of definitive laboratory tests and pathognomonic clinical features, MS remains ultimately a diagnosis of exclusion.

Diseases that may be confused with MS are: 1) Acute disseminated
25 encephalomyelitis (follows infections or vaccination mainly in children, fever, headaches, and meningitis common), 2) Lyme disease (antibodies to Borrelia species antigens in serum and CSF), 3) HIV associated myelopathy (HIV antibodies present), 4) HTLVI myelopathy (HTLVI antibodies present in serum/CSF), 5) Neurosyphilis (syphilis antibodies present in serum and/or CSF,

6) Progressive multifocal leukoencephalopathy (biopsy of lesions demonstrates virus by electron microscopy), 7) Systemic lupus erythematosus (CNS manifestations of lupus, antinuclear antibodies, anti-dsDNA), 8) Polyarteritis nodosa (systemic signs, micro-aneurysms demonstrated by angiographies, vasculitis demonstrated in biopsy of involved areas), 9) Sjogren's syndrome (dry eyes and mouth, antiRo and antiLa antibodies), 10) Behcet's disease (Oral/genital ulcers, antibodies to oral mucosa), 11) Sarcoidosis (CNS signs, increased protein in CSF, biopsy shows granuloma, 12) Paraneoplastic syndromes (older age group, antiYo antibodies), 13) Subacute combined degeneration of cord (peripheral neuropathy, vitamin B12 levels), 14) Sub acute myelo-optic-neuropathy (adverse reaction to chlorhydroxyquinoline, mainly in Japanese), 15) Hereditary spastic paraparesis/ primary lateral sclerosis (normal CSF, MRI and visual evoked potential studies), 16) Adrenomyeloneuropathy (adrenal dysfunction, neuropathy, increased plasma very long-chain fatty acids), 16) Spinocerebellar syndromes (familial, pes cavus scoliosis, abnormal reflexes, normal CSF IgG), 17) Miscellaneous – strokes, tumors, arteriovenous malformations, arachnoid cysts, Arnold-Chiari malformations, and cervical spondylosis all may lead to diagnostic dilemmas on occasion. Thus, detailed history and neurological examination must be complemented by specific laboratory tests for the correct diagnosis of MS. Clearly there is a long felt need for more powerful diagnostic tools for prediction and staging of MS.

Etiology of MS

The etiology of MS is unknown. It is suggested that a combination of genetic background and environmental factors and immune response are involved in the disease. A certain incidence of familial occurrence has been observed, with the concordance rate among monozygotic twins being 30%, a 10-fold increase over that in dizygotic twins or first-degree relatives (Steinman, 1966; Dymment et al Mol. Gen 1997;6:1693-98). In addition, recent research indicates that the tissue damage in MS occurs as the result of pathological

autoimmune responses to several myelin antigens following exposure to an as yet undefined environmental causal agent.

However, although some environmental factors have been statistically associated with the disease, none have provided correlations of any predictive value. Environmental factors seem to trigger MS in subjects who are already genetically susceptible to the illness. Most probably no one dominant gene determines genetic susceptibility, but rather many genes, each with different influence, are involved. Indeed, the initial pathogenic process could be caused by one group of genes, while others groups could be responsible for the development and progression of the disease (Oksenberg, 2001; Compston, 1997).

Microarray Analysis and MS

Microarray technology is based on hybridization of mRNA to high-density array of immobilized target sequences. Each sequence corresponds to a specific gene(s) of interest. The labeled pool of sample mRNA is subsequently hybridized to the array (chip). Application of this technology provides the capability of monitoring thousands of various genes simultaneously. Today commercial available DNA microarrays (Affymetrix, Santa Clara CA, USA) contain elements representing 10,000, 20,000 or more genes that have been characterized in terms of function or disease association. The preparation and use of microarrays for diagnostics, research and drug development is disclosed in, inter alia, US Pat. Nos. 6,324,497 and 6,468,476 to Friend et al and 6,410,229 to Lockhart et al; and Intl Pat. Application WO 0053625C2 and A2.

Several application of microarrays in human disease have been reported, for example the identification (marker) genes involved in ovarian carcinogenesis (Ono K., 2000); classification of genes expression profiling of cutaneous malignant melanoma (Bitter M., 2000); and expression profile of Tangl-Rearing CA1 neurons in Alzheimer's disease (Stephen, 2000). Alizaden (2000) characterized gene expression in diffuse large B cell lymphoma, where

two distinct gene expression patterns, characterized by different molecular forms of B cells lymphoma, were identified. In addition, microarray technology has also been applied to diagnosis and monitoring of such diverse diseases as cancer (US Pat. No. 6,511,849 to Freuhauf et al), psoriasis (Intl Pat. Application WO 20020027538 to Trepicchio et al), T-helper cell related diseases (Trepicchio et al , Intl Pat Application WO 20020039734), Epstein-Barr disease (U.S. Pat. Nos. 6,506,553 and 6,468,476 to Smith and Parks), rheumatoid arthritis (Intl Pat Application WO 0248310A2 to Trepicchio et al) and Reward Deficiency Syndrome, all of which are incorporated herein by reference.

In a recent review (Greenberg SA., 2001) the author discussed the potential application of DNA microarray technology for understanding neurological disorders. Using cDNA microarrays technology, brain tissue from pathology lesions and normal white matter of single MS patient were analyzed (Whitney LW.,1999). Blood genomic fingerprints were demonstrated after experimental strokes, seizures, hypoglycemia and hypoxia of rats (Yang Tang, 2001). Similarly, microarray analysis of gene expression in brainstem and spinal cord tissues from the animal models of MS (experimental autoimmune encephalomyelitis, EAE) has identified a number of differentially expressed genes from active-acute versus silent lesions (Lock C. et al Nat Med 2002;8,500-504), and also suggested a role for the proinflammatory cytokine osteopontin in the development of EAE in mice (Chabas D et al Science 2001;294:1731-34).

In another recent study, Ramanathan M et al (J of Immunology 2001;116:213-19) used cDNA microarray technology to identify abnormal gene expression patterns in PBMC of relapsing-remitting MS patients. The study compared PBMC gene expression in 15 patients during remission (only) with that of 15 healthy controls, using a GeneFilters GF211 array (Research Genetics, Huntsville AL, USA) having approximately 5200 human gene

sequences. Groups of marker genes correlated with MS were disclosed, but the range of differences (fold changes) between level of gene expression in MS and control groups was only 13 to 35 % for unregulated and from 11 to 43% for down regulated genes. Such small differences are probably due to the limited sensitivity of the technology employed in using GeneFilters arrays, and may not have any clinical or diagnostically mining significance. More significantly, the population of MS patients was limited, including only patients during clinical remission, who had not received any immunosuppressive treatment for at least 3 months. Thus, the markers described do not provide a profile of expression patterns useful for diagnosing clinically defined MS in patients having probable MS, or for determining stages of the disease.

Trepicchio et al. (Intl Pat. Application No. WO 02/079218 A1) also describe the use of microarray technology in determining characteristic gene expression in an animal model of MS (murine EAE) and in tissue samples from MS patients. The human samples were PBMC or brainstem tissue, collected from 60 patients manifesting a wide variety of symptoms, at different stages of MS including relapsing-remitting, primary and secondary progressive, and acute exacerbation. RNA probes prepared from these samples were hybridized to a human chip array containing approximately 14,000 gene sequences (MicroArray, Affymetrix, cat no. 510448, Santa Clara CA), and expression profiles compared with those of healthy controls. Determination of the panel of “MS-related” markers was based merely on fold change of greater than 2 fold (up- or downregulated), with a confidence level of $p < 0.01$. No more stringent statistical criteria were applied. A “panel” of 300 differentially regulated genes was thus described in the PBMC samples, and another 100 in the brain lesion tissue. However, no classification of expression profiles characteristic to specific stages of the disease was provided, and the “class predictor model”, as described, using “neighborhood analysis”, was applied for attempted prediction of “MS-afflicted” or “non-diseased” samples only. Thus, the panel of markers

described is not applicable to the diagnosis of stage of MS, in general, is unsuited for the prediction of clinically definite MS or probable MS patients, and is clearly non-predictive in monitoring response to treatment.

There is thus a widely recognized need for, and it would be highly advantageous to have gene expression profiles useful in distinguishing between different forms of MS e.g.: probable, relapsing-remitting, primary or secondary as well as response to the therapy, devoid of the above limitations.

SUMMARY OF THE INVENTION

According to one aspect of the present invention there is provided a method of diagnosing a subject with multiple sclerosis, the method comprising determining a level of expression of at least one gene selected from the group consisting of the genes listed in Tables I-V in a sample obtained from the subject, wherein a substantial difference between the level of expression of the gene in the sample obtained from the subject and a normal expression level of the gene is an indication that the subject is afflicted with multiple sclerosis.

According to further features in preferred embodiments of the invention described below a method of monitoring a state of multiple sclerosis in a subject, the method comprising monitoring a level of expression of at least one gene selected from the group consisting of the genes listed in Tables I-V over a predetermined time period, wherein substantial difference between the levels of expression of the at least one gene over the predetermined time period indicates a change in a state of the multiple sclerosis in the subject.

According to further features in preferred embodiments of the invention described below monitoring the level of expression of at least one gene over the predetermined time period is effected by periodically obtaining a sample from the individual and determining the level of expression of the at least one gene in the sample.

According to still further features in the described preferred embodiments the at least one gene comprises at least 10, at least 50, at least

100, at least 250, at least 500, at least 750, at least 1000 or at least 1200 genes each independently selected from the group consisting of the genes listed in Tables I-V.

According to another aspect of the present invention there is provided a method of diagnosing a subject with multiple sclerosis, the method comprising the step of determining a level of expression of each of the genes listed in Tables I-V in a sample obtained from the subject, wherein a substantial difference between expression levels of the genes in the sample obtained from the subject and normal expression levels of the genes is an indication that the subject is afflicted with multiple sclerosis.

According to further features in preferred embodiments of the invention described below the normal expression level of the at least one gene or genes is determined by measuring the level of expression of the gene or genes in at least one control sample obtained from at least one healthy individual.

According to still further features in the described preferred embodiments the sample includes peripheral blood mononuclear cells.

According to yet further features in the described preferred embodiments the substantial difference is a difference statistically significant at a confidence level of $p=0.05$ as determined by at least one test selected from the group consisting of a t-test, a TNoM and an INFO score.

According to further features in preferred embodiments of the invention described below the level of expression of the at least one gene or genes is determined by quantifying a level of a protein product thereof in the sample.

According to still further features in the described preferred embodiments quantifying a level of the protein is effected using a reagent which specifically binds with the protein.

According to yet further features in preferred embodiments of the invention described below the reagent comprises an antibody or fragments thereof.

According to further features in preferred embodiments of the invention described below the at least one gene or genes are selected from the genes listed in Table I.

5 According to still further features in preferred embodiments of the invention described below the at least one gene or genes are selected from the genes listed in Table II.

According to yet further features in preferred embodiments of the invention described below the at least one gene or genes are selected from the genes listed in Table III.

10 According to further features in preferred embodiments of the invention described below the at least one gene or genes are selected from the genes listed in Table IV.

15 According to still further features in the described preferred embodiments at least one gene or genes are selected from the genes listed in Table V.

According to yet further features in preferred embodiments of the invention described below the level of expression of the at least one gene or genes in the sample is determined by detecting the presence in the sample of a transcribed polynucleotide or portion thereof. The transcribed polynucleotide
20 can be mRNA.

According to further features in preferred embodiments of the invention described below the transcribed polynucleotide or portion thereof is detected via a labeled probe which specifically hybridizes with the transcribed polynucleotide or portion thereof.

25 According to still further features in the described preferred embodiments the sample from a subject is T cells, the at least one gene or genes are selected from the genes listed in Table IV and the normal expression of the gene or genes is T-cell expression.

According to an additional aspect of the present invention there is provided a method of assessing the efficacy of a treatment regimen on multiple sclerosis in a subject, the method comprising determining a level of expression of at least one gene or genes selected from the group consisting of the genes listed in Tables I-V in samples obtained from the subject prior to, and following exposure to the treatment regimen, wherein a substantial difference in the expression level of at least one gene or genes between the samples is an indication that the treatment regimen is efficacious in treating multiple sclerosis in the subject.

According to further features in preferred embodiments of the invention described below the treatment regimen is administering at least one test compound for inhibiting multiple sclerosis.

According to still further features in the described preferred embodiments the treatment regimen is an environmental condition.

According to yet further features in the described preferred embodiments the substantial difference is a difference statistically significant at a confidence level of $p=0.05$ as determined by at least one test selected from the group consisting of a t-test, a TNoM and an INFO score.

According to further features in preferred embodiments of the invention described below the level of expression of the at least one gene or genes is determined by quantifying a level of a protein product thereof in the sample.

According to still further features in the described preferred embodiments quantifying a level of the protein is effected using a reagent which specifically binds with the protein.

According to yet further features in preferred embodiments of the invention described below the reagent comprises an antibody or fragments thereof.

According to further features in preferred embodiments of the invention described below the at least one gene or genes are selected from the genes listed in Table I.

According to still further features in preferred embodiments of the invention described below the at least one gene or genes are selected from the genes listed in Table II.

According to yet further features in preferred embodiments of the invention described below the at least one gene or genes are selected from the genes listed in Table III.

According to further features in preferred embodiments of the invention described below the at least one gene or genes are selected from the genes listed in Table IV.

According to still further features in the described preferred embodiments at least one gene or genes are selected from the genes listed in Table V.

According to yet further features in preferred embodiments of the invention described below the level of expression of the at least one gene or genes in the sample is determined by detecting the presence in the sample of a transcribed polynucleotide or portion thereof. The transcribed polynucleotide can be mRNA.

According to further features in preferred embodiments of the invention described below the transcribed polynucleotide or portion thereof is detected via a labeled probe which specifically hybridizes with the transcribed polynucleotide or portion thereof.

According to still further features in the described preferred embodiments the sample from a subject is T cells, the at least one gene or genes are selected from the genes listed in Table IV and the normal expression of the gene or genes is T-cell expression.

According to still further features in the described preferred embodiments the at least one gene comprises at least 10, at least 50, at least 100, at least 250, at least 500, at least 750, at least 1000 or at least 1200 genes each independently selected from the group consisting of the genes listed in
5 Tables I-V.

According to another aspect of the present invention there is provided a kit for diagnosing multiple sclerosis in a subject, the kit comprising components suitable for determining expression levels of at least one gene selected from the group of genes listed in Tables I-V.

10 According to further features in the described preferred embodiments the reagents include at least one polynucleotide sequence selected capable of specifically hybridizing with an transcription product of the at least one gene and reagents for detecting and optionally quantifying a complex formed from the at least one polynucleotide sequence and said transcription product.

15 According to still further features in the described preferred embodiments the reagents include at least one antibody selected capable of specifically binding a polypeptide product of the at least one gene and reagents for detecting and optionally quantifying a complex formed from the at least one antibody and the polypeptide product.

20 According to further features in preferred embodiments of the invention described below the at least one gene is selected from the genes listed in Table I.

According to still further features in preferred embodiments of the invention described below the at least one gene is selected from the genes listed
25 in Table II.

According to yet further features in preferred embodiments of the invention described below the at least one gene is selected from the genes listed in Table III.

According to further features in preferred embodiments of the invention described below the at least one gene is selected from the genes listed in Table IV.

According to still further features in the described preferred
5 embodiments at least one gene is selected from the genes listed in Table V.

According to further features in preferred embodiments of the invention described below the kit further comprises packaging material identifying the kit as useful from diagnosing MS.

According to another aspect of the present invention there is provided a
10 polynucleotide array comprising at least 10 and no more than 1500 polynucleotide sequences, wherein each of the sequences is selected capable of hybridizing with a transcription product of a polynucleotide sequence of a gene selected from the group of genes listed in Tables I-V.

According to further features in preferred embodiments of the invention
15 described below the array is selected having polynucleotide sequences capable of diagnosing subjects suspected of suffering from multiple sclerosis. The subjects may also be suspected of suffering from probable multiple sclerosis, primary progressive multiple sclerosis, secondary progressive multiple sclerosis, and/or relapsing/remitting multiple sclerosis.

According to further features in preferred embodiments of the invention
20 described below the gene is selected from the genes listed in Table I, II, III, IV and/or IV.

According to yet another aspect of the present invention there is provided an array comprising at least 10 and no more than 1500 antibodies or
25 antibody fragments each capable of specifically binding a protein product of a gene selected from the group of genes listed in Tables I-V.

According to further features in preferred embodiments of the invention described below the array is selected having antibodies or antibody fragments capable of diagnosing subjects suspected of suffering from multiple sclerosis.

The subjects may also be suspected of suffering from probable multiple sclerosis, primary progressive multiple sclerosis, secondary progressive multiple sclerosis, and/or relapsing/remitting multiple sclerosis.

According to further features in preferred embodiments of the invention
5 described below the gene is selected from the genes listed in Table I, II, III, IV and/or IV.

Implementation of the method and system of the present invention involves performing or completing selected tasks or steps manually, automatically, or a combination thereof. Moreover, according to actual
10 instrumentation and equipment of preferred embodiments of the method and system of the present invention, several selected steps could be implemented by hardware or by software on any operating system of any firmware or a combination thereof.

15 BRIEF DESCRIPTION OF THE DRAWINGS

The invention is herein described, by way of example only, with reference to the accompanying drawings. With specific reference now to the drawings in detail, it is stressed that the particulars shown are by way of example and for purposes of illustrative discussion of the preferred
20 embodiments of the present invention only, and are presented in the cause of providing what is believed to be the most useful and readily understood description of the principles and conceptual aspects of the invention. In this regard, no attempt is made to show structural details of the invention in more detail than is necessary for a fundamental understanding of the invention, the
25 description taken with the drawings making apparent to those skilled in the art how the several forms of the invention may be embodied in practice.

In the drawings:

FIGs. 1A-B are graphic representations of the differences in PMBC gene expression between MS patients and healthy subjects. RNA from Peripheral

Blood Mononuclear Cells (PMBC) of 26 patients diagnosed with MS, and 18 healthy, age-matched controls was purified, labeled hybridized to a Genechip array (U95Av2, Affymetrix Inc. Santa Clara CA, USA), scanned and analyzed according to manufacturer's recommendations. The data were normalized and fold ratios calculated for each gene of the MS samples against the geometric mean of the controls. Figure 1A shows the number of MS specific genes detected having increased expression (fold change greater than 1.5) analyzed by t-test (red line), TNoM (green line) and INFO (blue line), compared with random occurrence (black line), at confidence levels (False Discovery Rates, FDR) of 90% ($p=0.10$) to 100% ($p=0$). Note the high level of significant MS-related gene expression at 95% FDR and above (arrows) (1249 distinguished genes). Figure 1B is an infogram of the 1249 genes most significantly ($p<0.05$ on all three tests) distinguishing MS patients (MS) from (control) healthy controls, determined as above. Each spot represents expression of a specific gene; color intensity of overexpressed (green) and under-expressed (red) genes indicates fold increase as compared to controls. Gray color indicates genes showing no difference in expression between MS and controls.

FIGs. 2A-B are graphic representations of the differences in PMBC gene expression between MS patients during acute relapse, and MS patients in remission. RNA from PMBC of 12 relapsed, and 14 clinically in remission patients was purified, labeled, hybridized and analyzed as described for Figures 1A-B hereinabove. Figure 2A shows the number of acute relapse-specific genes detected having increased expression in relapse, as analyzed by t-test (red line), TNoM (green line) and INFO (blue line), compared with random occurrence (black line), at confidence levels (False Discovery Rates, FDR) of 90% ($p=0.10$) to 100% ($p=0$). 735 genes were detected having significant relapsing-related gene expression at 95% FDR and above. Figure 2B is an infogram analysis of the 735 genes most significantly ($p<0.05$ on all three tests) distinguishing acute relapsing MS patients (Relapse) from MS patients in

remission (Remission). Note the different profiles of gene expression in patients undergoing treatment (Relapse + and Remission +) compared with untreated patients (Relapse- and Remission -).

FIG. 3 is a pie chart diagram showing the breakdown, by functional character, of specific genes displaying up- or down-regulation in MS-derived MOG-reactive T-cell lines, as compared to normal-derived MOG-reactive T-cell lines. Significant MOG reactive MS-related genes are defined as genes with TNoM=0 and $p=0.057$ as compared to normal MOG-reactive T-cells.

FIG. 4 is a graphic representation of the differences in gene expression between MOG-stimulated T-cell lines from MS patients and healthy controls. RNA from MOG-stimulated T-cells of 4 MS patients and 3 matched controls was purified, labeled, hybridized and analyzed as described for Figures 1A-B hereinabove. Panel A shows a cluster analysis of 150 differentially expressed genes analyzed as described hereinabove (TNoM=0, $p<0.05$) distinguishing T-cells of MS (MS) patients from controls (Controls). Panel B shows a cluster analysis of the 43 most informative genes (TNoM=0, $p<0.05$, and fold change >1.5). Each row represents a gene, and each column represents a T-cell line from a different subject. Yellow color indicates genes with an increased expression relative to controls are yellow, and blue color indicates genes with relative decreased expression.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention is of methods and kits for diagnosing multiple sclerosis in subjects, using novel gene expression profiles derived from peripheral blood cells. Specifically, the present invention can be used to diagnose MS in early stages of the disease, to determine clinical stage and predict the course of the disease in patients with a unclear diagnoses, to provide definition and prognostic information in patients with probable MS, to assess

and monitor MS therapies and to screen new and established drugs and treatments for MS.

The principles and operation of the present invention may be better understood with reference to the drawings and accompanying descriptions.

5 Before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and the arrangement of the components set forth in the following description or illustrated in the Examples and drawings. The invention is capable of other embodiments or of being practiced or carried out
10 in various ways. Also, it is to be understood that the phraseology and terminology employed herein is for the purpose of description and should not be regarded as limiting.

The present invention provides previously unavailable accuracy in predicting and staging MS, by identifying genes and groups of genes
15 specifically over- and under-expressed in PBMC of patients at various stages of their disease.

As is further described in the Examples section which follows, the present inventors have conducted a broad scale analysis of PMBC expressed genes using hybridization of biotin-labeled PBMC mRNA to more than 12,000
20 human gene sequences provided on DNA chips. By utilizing specialized statistical analysis approaches, the present inventors identified in the microarray data the most highly informative expression profiles.

As mentioned hereinabove, multiple sclerosis is a chronic, multi-factorial neurodegenerative disease of unknown etiology, the diagnosis and
25 classification of which remains largely clinical in nature. Identification of the stages and progression of the disease, particularly definition of the probable MS stage, is crucial to determination of optimal treatment regimen and development of effective therapies. However, the complexities of autoimmune interactions, and the variability of MS in different individuals have made diagnosis and

subsequent prognosis using traditional methods inexact and challenging. Methods for more accurate diagnosis of MS are greatly needed.

The profiles of MS-related genetic markers listed in Table I represent genes exhibiting differential expression in PBMCs from a large sample of MS patients, compared to that of age-matched healthy controls. Abundance of specific gene transcripts, represented by the intensity of label hybridizing to individual sequence loci of the MicroArray (Affymetrix Inc, Santa Clara CA), was recorded and quantified according to the manufacturers recommended protocols (such as GeneChip 3.0 software from Affymetrix). However, rather than composing the profile of differentially expressed genes based on probabilities using simple distribution of mean intensities, as has been reported by Ramanathan et al (J Immunol 2001;116:213-219), informative genes were selected based on the degree to which they were predictive of classification of the sample as “diseased” or “not diseased”. By applying the rigorous three-pronged statistical analysis described in detail hereinbelow, 1249 genes most informative in distinguishing between diseased and otherwise not diseased patients were identified (see Table I). By applying an even more restrictive analysis of the data in Table I (see Table II, Bonfferoni analysis), a subset of the 300 highest scoring genes was identified. These MS marker genes comprise both over-expressed and downregulated genes, and represent of a diverse group of functional gene categories. Additional analysis of the markers uncovered herein also led to the identification of another restricted marker set which can be accurately utilized to diagnose probable MS patients. As is further described hereinbelow, the identification of such a marker set represents a significant breakthrough since it enables to treat individuals at a much earlier stage of MS then previously possible.

Thus, according to one aspect of the present invention there is provided a method of diagnosing a subject with multiple sclerosis by determining a level of expression of at least one gene of the genes listed in Tables I-V in a sample

obtained from the subject, wherein a substantial difference between the level of expression of the gene in the sample obtained from the subject and a normal expression level of the gene is an indication that the subject is afflicted with multiple sclerosis.

5 Normal expression levels of a marker or markers are obtained from isolated or cultured PMBCs (e.g., T-cell cultures), or samples obtained from individuals not affected with MS. A substantial difference is preferably of a magnitude that is statistically significant (see the Examples section for more detail). In particularly preferred embodiments, the marker is increased or
10 decreased relative to control samples by at least 2-, 3-, 4-, 5-, 6-, 7-, 8-, 9-, or 10-fold or more. Similarly, one skilled in the art will be well aware of the fact that a preferred detection methodology is one in which the resulting detection values are above the minimum detection limit of the methodology utilized.

 As is further described in the Examples section which follows, the
15 marker listed in Tables I-V were identified in peripheral blood cells. As such, the sample obtained from the individual is preferably a peripheral blood sample or any sample which includes blood cells such as T-cells. In a preferred embodiment, the sample is blood, thymus, spleen, lymph, pus, or bone marrow. However, it will be apparent to one skilled in the art that PMBCs may be
20 present as an infiltrate in many other tissues, and that such tissues may also serve as samples in which the presence, activity, and/or quantity of the markers of the invention may be assessed. The tissue samples containing one or more of the markers themselves may be useful in the methods of the invention, and one skilled in the art will be well aware of methods by which such samples may be
25 conveniently obtained, stored, preserved and processed. For further description relating to collection and processing of blood samples please see the Examples section which follows.

 As is detailed in the Examples section below, analysis of PBMC genes differentially expressed in MS, according to the methods described herein,

revealed groups of genes of specific interest in MS. Genes that are most significantly over expressed, or downregulated in MS can indicate members of pathways important to disease development or pathology. Strongly overexpressed genes, according to Tables I and II, include **SLAM** (signaling lymphocyte activation molecule, GenBank Accession No. U33017), **LEF1** (lymphoid enhancer-binding factor 1, GenBank Accession No. AL099409), **LRP5** (low density lipoprotein receptor-related protein 5, GenBank Accession No. AF077820), **LILRB** (leukocyte immunoglobulin-like receptor, GenBank Accession No. AF004230), **LY75** (lymphocyte antigen 75, GenBank Accession No. AF011333), **CDW52** (GenBank Accession No. N90866), **PIP5K1-gamma** (Phosphatidylinositol-4-phosphate 5-kinase, type 1, gamma, GenBank Accession No. AB011161), **MAP4** (Microtubule-associated protein 4, GenBank Accession No. M64571), **CTSK** (Cathepsin K, GenBank Accession No. X82153) and **CTSB** (Cathepsin B, GenBank Accession No. L22507).

Strongly down-regulated genes include **IL1B** (Interleukin 1 beta, GenBank Accession No. M15330), **TRAF6** (GenBank Accession No. U78798), **SCYA20** (GenBank Accession No. U64197), **IL1R** (type1 receptor, GenBank Accession No. M27492), **IL1RAP** (receptor accessory protein, GenBank Accession No. AB006537) and **IL1RN** (receptor antagonist, GenBank Accession No. X52015), **TGFB1** (Transforming growth Factor beta 1, GenBank Accession No. X05839), **SKI** (v-ski sarcoma viral oncogene homologue, GenBank Accession No. X15218), **VEGF** (Vascular endothelial growth factor, GenBank Accession No. M63978), **IGFBP4** (Insulin-like growth factor binding protein 4, GenBank Accession No. U20982), **EREG** (epiregulin, GenBank Accession No. NM_001432.1), and **NR4A1**, **NR4A2**, **NR4A3** (nuclear receptor family genes, GenBank Accession Nos. NM_002135.1, X75918 and U12767, respectively).

Functional groups of genes strongly represented in the profile of most significantly differentially regulated genes in MS include, inter alia, apoptosis-related genes, T-cell activation and expansion related genes, cell proliferation related genes and epidermal growth factor genes. Many of the marker genes
5 identified are associated with other MS- related genes, according to Tables I-V.

It will be appreciated that although a single marker can be used for diagnosis, diagnostic accuracy typically increases with an increase in the number of markers utilized.

As such, the diagnostic method of the present invention preferably
10 utilizes a marker set that can range anywhere from 2 genes to 1200 genes. For example, the present method can utilize at least 10, at least 50, at least 100, at least 250, at least 500, at least 750, at least 1000 or at least 1200 genes each independently selected from the group consisting of the genes listed in Tables I-V. Most preferably the markers utilized are selected from the sequences listed
15 in Table II.

The markers sets utilized can be selected according to a statistical significance or fold change thereof (provided for each marker in Tables I-V), a higher significance and higher fold change indicating higher probability of marker accuracy. For example, a selected marker set can encompass markers
20 displaying a high statistical significance (low P-value), preferably a P-value lower than 5.0E-02, more preferably lower than 5.0E-04, most preferably, lower than 5.0E-06. Alternatively, markers can be selected according to shared features of the marker gene. For example, gene markers of similar cellular function (e.g., genes of a signaling pathway such as apoptosis) or markers
25 displaying similar activity (e.g., enzymes of the same enzyme family) can be grouped into specific marker sets.

Each marker set may be considered individually, although it is within the scope of the invention to provide combinations of two or more marker sets for

use in the methods and compositions of the invention to increase the confidence of the analysis.

As used herein, the terms "polynucleotide" and "oligonucleotide" are used interchangeably, and include polymeric forms of nucleotides of any length, either deoxyribonucleotides or ribonucleotides, or analogs thereof. Polynucleotides may have any three-dimensional structure, and may perform any function, known or unknown. The following are non-limiting examples of polynucleotides: a gene or gene fragment, exons, introns, messenger RNA (mRNA), transfer RNA, ribosomal RNA, ribozymes, cDNA, recombinant polynucleotides, branched polynucleotides, plasmids, vectors, isolated DNA of any sequence, isolated RNA of any sequence, nucleic acid probes, and primers. A polynucleotide may comprise modified nucleotides, such as methylated nucleotides and nucleotide analogs. If present, modifications to the nucleotide structure may be imparted before or after assembly of the polymer. The sequence of nucleotides may be interrupted by non-nucleotide components. A polynucleotide may be further modified after polymerization, such as by conjugation with a labeling component. The term also includes both double- and single-stranded molecules. Unless otherwise specified or required, any embodiment of this invention that is a polynucleotide encompasses both the double-stranded form and each of two complementary single-stranded forms known or predicted to make up the double-stranded form.

As used herein, a "gene" includes a polynucleotide containing at least one open reading frame that is capable of encoding a particular polypeptide or protein after being transcribed and translated. Any of the polynucleotide sequences described herein may be used to identify larger fragments or full-length coding sequences of the gene with which they are associated. Methods of isolating larger fragment sequences are known to those of skill in the art, some of which are described herein. A "gene product" includes an amino acid

(e.g., peptide or polypeptide) generated when a gene is transcribed and translated.

As used herein, a "probe" is defined as an oligonucleotide that is provided as a reagent to detect a target present in a sample of interest by hybridizing with the target. Usually, a probe will comprise a label or a means by which a label can be attached, either before or subsequent to the hybridization reaction. Suitable labels include, but are not limited to radioisotopes, fluorochromes, chemiluminescent compounds, dyes, and proteins, including enzymes.

As used herein, "expression" includes the process by which polynucleotides are transcribed into mRNA and translated into peptides, polypeptides, or proteins. "Differentially expressed", as applied to a gene, includes the differential production of mRNA transcribed from a gene or a protein product encoded by the gene. A differentially expressed gene may be overexpressed or underexpressed as compared to the expression level of a normal or control cell. In one aspect, it includes a differential that is 2.5 times, preferably 5 times or preferably 10 times higher or lower than the expression level detected in a control sample. The term "differentially expressed" also includes nucleotide sequences in a cell or tissue which are expressed where silent in a control cell or not expressed where expressed in a control cell.

As used herein, the term "polypeptide" is defined as a compound of two or more subunit amino acids, amino acid analogs, or peptidomimetics. The subunits may be linked by peptide bonds. In another embodiment, the subunit may be linked by other bonds, e.g., ester, ether, etc. As used herein the term "amino acid" includes either natural and/or unnatural or synthetic amino acids, including glycine and both the D or L optical isomers, and amino acid analogs and peptidomimetics. A peptide of three or more amino acids is commonly referred to as an oligopeptide. Peptide chains of greater than three or more amino acids are referred to as a polypeptide or a protein.

As used herein, the term "marker" is defined as a polynucleotide or polypeptide molecule which is present or absent, or increased or decreased in quantity or activity in subjects afflicted with multiple sclerosis, or in cells involved in multiple sclerosis. The relative change in quantity or activity of the marker is correlated with the incidence or risk of incidence of multiple sclerosis or progression from one stage of the disease to another.

Although all of the markers listed in Tables I-V can be used in diagnosis of MS, an additional object of the present invention was to identify those markers which can be utilized to diagnose specific clinical forms and/or stages of MS.

Accurate clinical tools for specific diagnosis of disease stages in MS are presently unavailable.

As a result of comprehensive studies conducted in efforts to evaluate specific gene expression in relation to clinical disease phases, the present invention provides, for the first time, specific markers sets which can be utilized in accurate diagnosis of specific forms and stages of MS

As is illustrated in Example II of the Examples section which follows, the present invention provides marker sets which can be accurately utilized to diagnose acute relapse, remission and probable stages of MS (Tables III-V).

Of particular importance is the marker set provided in Table V. As is described in the Examples section which follows, the present inventors also uncovered cellular markers which distinct between disease-related and non-disease related T-cell myelin reactivity. Although MS appears to be caused by autoimmune T-cells activated against myelin self-antigens, myelin-reactive T-cells have been demonstrated in healthy subjects as well. Thus, distinction between disease-related and non-disease related T-cell myelin reactivity is of great clinical and investigational importance.

Cellular markers which distinct between disease-related and non-disease related T-cell myelin reactivity include down-regulating apoptosis associated

genes, up regulating anti-apoptotic genes and genes responsible for increased expansion capability of autoreactive T cells and enhanced ability to penetrate the CNS. Thus, the markers of Table V include genes involved in perpetuating pathologic cellular proliferation and tissue destruction within the CNS characteristic of MS, along with increased resistance to regulation. This marker set accurately defines the requirements for an individual to develop MS, and thus has important predictive value, especially in diagnosing individuals having MS in the “probable” stage.

The identification of these markers significantly advances the field of MS diagnosis and treatment as well as provides tools which will enable elucidation of the mechanisms underlying MS formation and progression, ultimately leading to formulation of efficient, stage specific, treatment regimens.

The markers of the invention may be nucleic acid molecules (e.g., DNA, cDNA, or RNA) or the polypeptides encoded thereby. As such, detection of markers in a sample obtained from an individual can be effected using various detection methods well known to the ordinary skilled artisan.

Briefly, measurement of the relative amount of nucleic acid or polypeptide molecules can be effected by any method known in the art (see, e.g., Sambrook, J., Fritsh, E. F., and Maniatis, T. *Molecular Cloning: A Laboratory Manual*. 2nd, ed, Cold Spring Harbor Laboratory, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., 1989; and *Current Protocols in Molecular Biology*, eds. Ausubel et al. John Wiley & Sons: 1992). Typical methodologies for RNA detection include RNA extraction from a cell or tissue sample, followed by hybridization of a labeled probe (e.g., a complementary nucleic acid molecule) specific for the target RNA to the extracted RNA, and detection of the probe (e.g., Northern blotting). Typical methodologies for polypeptide detection include activity assays in cases of known enzymes, protein extraction from a cell or tissue sample, followed by

hybridization of a labeled probe (e.g., an antibody) specific for the target protein to the protein sample, and detection of the probe. The label group can be a radioisotope, a fluorescent compound, an enzyme, or an enzyme co-factor. Detection of specific polypeptide and nucleic acid molecules may also be assessed by gel electrophoresis, column chromatography, direct sequencing, or quantitative PCR (in the case of nucleic acid molecules) among many other techniques well known to those skilled in the art.

Probes based on the nucleotide sequence of a marker gene or of a nucleic acid molecule encoding a marker polypeptide of the invention can be used to detect transcripts or genomic sequences corresponding to the marker gene(s) and/or marker polypeptide(s) of the invention. In preferred embodiments, the probe comprises a label group attached thereto, e.g., the label group can be a radioisotope, a fluorescent compound, an enzyme, or an enzyme co-factor. Such probes can be used as a part of a diagnostic test kit for identifying cells or tissue which misexpress (e.g., over- or under-express) a marker polypeptide of the invention, or which have greater or fewer copies of a marker gene of the invention. For example, a level of a marker polypeptide-encoding nucleic acid in a sample of cells from a subject may be detected, the amount of mRNA transcript of a gene encoding a marker polypeptide may be determined, or the presence of mutations or deletions of a marker gene of the invention may be assessed. The invention further encompasses nucleic acid molecules that differ from the nucleic acid sequences of the genes set forth in Tables I-V, due to degeneracy of the genetic code and which thus encode the same proteins as those encoded by the genes shown in Tables I-V.

An isolated marker protein, or a portion or fragment thereof, can be used as an immunogen to generate antibodies that bind marker proteins using standard techniques for polyclonal and monoclonal antibody preparation. A full-length marker protein can be used or, alternatively, the invention provides antigenic peptide fragments of these proteins for use as immunogens. The

antigenic peptide of a marker protein comprises at least 8 amino acid residues of an amino acid sequence encoded by a gene set forth in Tables I-V, and encompasses an epitope of a marker protein such that an antibody raised against the peptide forms a specific immune complex with the marker protein.

5 Preferably, the antigenic peptide comprises at least 10 amino acid residues, more preferably at least 15 amino acid residues, even more preferably at least 20 amino acid residues, and most preferably at least 30 amino acid residues. Preferred epitopes encompassed by the antigenic peptide are regions of the marker protein that are located on the surface of the protein, e.g., hydrophilic regions, as well as regions with high antigenicity.

10 An anti-marker protein antibody (e.g., monoclonal antibody) can be used to isolate a marker protein of the invention by standard techniques, such as affinity chromatography or immunoprecipitation. An anti-marker protein antibody can facilitate the purification of natural marker proteins from cells and of recombinantly produced marker proteins expressed in host cells. Moreover, 15 an anti-marker protein antibody can be used to detect marker protein (e.g., in a cellular lysate or cell supernatant) in order to evaluate the abundance and pattern of expression of the marker protein. Anti-marker protein antibodies can be used diagnostically to monitor protein levels in tissue as part of a clinical testing procedure, e.g., to, for example, determine the efficacy of a given 20 treatment regimen. Detection can be facilitated by coupling (i.e., physically linking) the antibody to a detectable substance. Examples of detectable substances include various enzymes, prosthetic groups, fluorescent materials, luminescent materials, bioluminescent materials, and radioactive materials. 25 Examples of suitable enzymes include horseradish peroxidase, alkaline phosphatase, -galactosidase, or acetylcholinesterase; examples of suitable prosthetic group complexes include streptavidin/biotin and avidin/biotin; examples of suitable fluorescent materials include umbelliferone, fluorescein, fluorescein isothiocyanate, rhodamine, dichlorotriazinylamine fluorescein,

dansyl chloride or phycoerythrin; an example of a luminescent material includes luminol; examples of bioluminescent materials include luciferase, luciferin, and aequorin, and examples of suitable radioactive material include ^{125}I , ^{131}I , ^{35}S or ^3H .

5 The nucleic acid and protein sequences of the present invention can further be used as a "query sequence" to perform a search against public databases to, for example, identify other family members or related sequences. Such searches can be performed using the NBLAST and XBLAST programs (version 2.0) of Altschul, et al. (J. Mol. Biol. 1990;215:403-10). BLAST
10 nucleotide searches can be performed with the NBLAST program, score=100, wordlength=12 to obtain nucleotide sequences homologous to nucleic acid molecules of the invention. BLAST protein searches can be performed with the XBLAST program, score=50, wordlength=3 to obtain amino acid sequences homologous to marker protein molecules of the invention. To obtain gapped
15 alignments for comparison purposes, Gapped BLAST can be utilized as described in Altschul et al., (1997) Nucleic Acids Res. 25(17):3389-3402. When utilizing BLAST and Gapped BLAST programs, the default parameters of the respective programs (e.g., XBLAST and NBLAST) can be used. See <http://www.ncbi.nlm.nih.gov>.

20 It will be appreciated that non-coding sequences, such as promoter or other regulatory sequences of marker genes may be used as probes in the context of the present invention. Thus, the expression of groups of functionally related genes, responsive to similar signals important to the pathogenesis or progression of multiple sclerosis, may be assessed.

25 It will be appreciated that in certain cases the genes themselves can serve as markers. For example, mutations in the nucleic acid sequence of a gene (e.g., non-sense, mis-sense deletion and the like) which result in lower expression levels of the gene or lower activity of the gene product may be correlated with MS. Similarly, a duplication of the gene, which can result in higher expression

levels or mutations which result in higher activity can also be correlated with MS.

Detection of the presence or number of copies of all or a part of a marker gene of the invention may be performed using any method known in the art.

5 Typically, it is convenient to assess the presence, quantity and quality of genomic DNA by Southern analysis, in which total DNA from a cell or tissue sample is extracted, is hybridized with a labeled probe (e.g., a complementary DNA molecule), and the probe is detected. The label group can be a radioisotope, a fluorescent compound, an enzyme, or an enzyme co-factor.
10 Other useful methods of DNA detection and/or quantification include direct sequencing, gel electrophoresis, column chromatography, and quantitative PCR, as is known by one skilled in the art.

In cases where detection involves discrete marker sets, the detection method of the present invention preferably employs marker probes which are
15 conjugated to a solid support. For example, polynucleotide probes capable of specifically hybridizing with polynucleotide markers of the present invention (e.g., mRNA) may be coupled to an array (e.g., a GeneChip array for hybridization analysis), to a resin (e.g., a resin which can be packed into a column for column chromatography), or a matrix (e.g., a nitrocellulose matrix
20 for northern blot analysis). The immobilization of molecules complementary to the marker(s), either covalently or noncovalently, permits a discrete analysis of the presence or activity of each marker in a sample. In an array, for example, polynucleotides complementary to each member of a marker set may individually be attached to different, known locations on the array (region-specific arrays).
25 The array may be hybridized with, for example, polynucleotides extracted from a blood sample obtained from a subject. The hybridization of polynucleotides extracted from the sample with the array at any location on the array can be detected, and thus the presence or quantity of the marker in the sample can be ascertained. In a preferred embodiment, a

"GeneChip" array is employed (e.g., an Affymetrix type array). Similarly, Western analyses may be performed on immobilized antibodies specific for different polypeptide markers hybridized to a protein sample from a subject.

It will also be apparent to one skilled in the art that the probes of the array need not bind with the entire marker molecule. A probe designed to bind a portion of the marker of sufficient length for detection purposes (e.g., for hybridization), for example, a portion of the marker which is 7, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 100 or more nucleotides or amino acids in length may be sufficient for detection purposes.

Polynucleotide probes can be synthesized using any known synthesis method. Preferably, synthesis is effected using on-chip lithography methodology in a manner similar to that utilized for the synthesis of Affymetrix chips (www.affymetrix.com). Additional methods of array production and methodology are described in detail in the U.S. Patent Applications cited in the Background section hereinabove.

Antibody probes useful for detecting polypeptide markers can be generated using various well known techniques. For example, monoclonal antibodies which can be used per se or as a basis for antibody fragments (scFv, Fab etc) can be synthesized using isolated Hybridomas. In such an approach, a protein corresponding to a marker of the invention is isolated (e.g., by purification from a cell in which it is expressed or by transcription and translation of a nucleic acid encoding the protein in vivo or in vitro using known methods. A vertebrate, preferably a mammal such as a mouse, rat, rabbit, or sheep, is immunized using the isolated protein or protein fragment. The vertebrate may optionally (and preferably) be immunized at least one additional time with the isolated protein or protein fragment, so that the vertebrate exhibits a robust immune response to the protein or protein fragment. Splenocytes are isolated from the immunized vertebrate and fused with an immortalized cell line to form hybridomas, using any of a variety of methods

well known in the art. Hybridomas formed in this manner are then screened using standard methods to identify one or more hybridomas which produce an antibody which specifically binds with the protein or protein fragment.

5 The invention also includes an array comprising a marker(s) of the present invention. The array can be used to assay expression of one or more genes in the array.

In one embodiment, the array can be used to assay gene expression in a tissue of multiple sclerosis patients at different stages of the disease to ascertain stage specificity of genes in the array. In this manner, more than about 30,000
10 genes can be simultaneously assayed for expression. This allows a profile to be developed showing a battery of genes specifically expressed in one or more stages of the disease.

In addition to such qualitative determination, the invention allows the quantitation of gene expression. Thus, not only stage specificity, but also the
15 level of expression of a battery of stage specific genes is ascertainable. Thus, genes can be grouped on the basis of their expression per se, and level of expression in that stage of the disease.

The detection arrays described herein are preferably packaged in kits identified for use in detecting MS in general or for detecting specific stages of
20 MS. The kit can further include reagents suitable for the detection of polynucleotide hybridization or antibody binding and instructions for effecting diagnosis using the kit components and suitable detection hardware (e.g., detection microscope) and software (e.g., detection and analysis software). For further description of such hardware and software and detection reagents please
25 see www.affymetrix.com.

Thus, the present invention provides methods useful for diagnosing MS including specific stages or states of the disease and also a risk of developing the disease.

These methods involve isolating a sample from a subject (e.g., a sample containing T-cells), detecting the presence, quantity, and/or activity of one or more markers of the invention in the sample relative to a normal sample. Observing a significant increase or decrease in one or more markers in the test
5 sample indicates the presence or risk of presence of MS.

Using specific marker sets, the present invention also provides methods of assessing the severity or stage of MS in a subject.

As detailed hereinabove, a major concern in treatment of multiple sclerosis is accurate early diagnosis following the first acute attack. At present,
10 clinical studies indicate that only 40-50% of individuals suffering a first acute attack will progress to clinically definite MS. Thus, treatment protocols most commonly suspend treatment of these patients defined as probable MS, until the appearance of a second attack, which may entail years of waiting and uncertainty. It will be appreciated that early and accurate detection of the
15 portion of probable MS patients likely to progress to further stages of the disease can save undue suffering and expense, and, more importantly, provide early treatment and a better prognosis for the portion of probable MS patients likely to progress to more severe stages. The present invention provides, for the first time, marker genes for probable MS, as well as for relapsing vs.
20 remitting MS.

The present invention also provides methodology which can be used to assess the efficacy of an MS treatment regimen and/or the effect of environmental factors or diet on the progression of MS.

These methods involve isolating a sample from a subject (e.g., a sample
25 containing T-cells) suffering from MS who is undergoing treatment which includes drug therapy, exposure to a predetermined environmental condition and/or a specific diet, detecting the presence, quantity, and/or activity of one or more markers of the invention in test samples obtained from the subject prior to and following treatment or in a test sample obtained from the subject relative to

a sample obtained from an individual suffering from MS who is not undergoing any treatment and/or relative to a sample obtained from an individual not suffering from MS and undergoing treatment. The levels of markers in the samples are compared, and significant increases or decreases in one or more markers in the test sample following treatment relative to the other samples are observed, and correlated with the severity or stage of MS. By assessing whether MS has been lessened or alleviated, the ability of the treatment or therapy to treat MS is also determined.

It will be appreciated that the present invention also provides methods of treating (e.g., inhibiting) the formation or progression of MS. These methods involve isolating a sample from a subject (e.g., a sample containing PMBCs such as T-cells), detecting the presence, quantity, and/or activity of one or more markers of the invention in the sample relative to a normal sample and observing significant increases or decreases in one or more markers in the test sample. For markers that are significantly decreased in expression or activity, the subject may be administered that expressed marker protein, or may be treated by the introduction of mRNA or DNA corresponding to the decreased marker (e.g., by gene therapy), to thereby increase the levels of the marker protein in the subject. For markers that are significantly increased in expression or activity, the subject may be administered mRNA or DNA antisense to the increased marker (e.g., by gene therapy), or may be administered antibodies specific for the marker protein, to thereby decrease the levels of the marker protein in the subject. In this manner, the subject may be treated for MS or MS related condition.

In another embodiment, the methods further involve obtaining a control biological sample (e.g., nondiseased tissue) from a control subject, contacting the control sample with a compound or agent capable of detecting marker protein, mRNA, or genomic DNA, such that the presence of marker protein, mRNA or genomic DNA is detected in the biological sample, and comparing

the presence of marker protein, mRNA or genomic DNA in the control sample with the presence of marker protein, mRNA or genomic DNA in the test sample.

The invention also provides methods for identifying modulators, i.e.,
5 candidate or test compounds or agents (e.g., peptides, peptidomimetics, peptoids, small molecules or other drugs) which (a) bind to the marker, or (b) have a modulatory (e.g., stimulatory or inhibitory) effect on the activity of the marker or, more specifically, (c) have a modulatory effect on the interactions of the marker with one or more of its natural substrates (e.g., peptide, protein,
10 hormone, co-factor, or nucleic acid), or (d) have a modulatory effect on the expression of the marker. Such assays typically comprise a reaction between the marker and one or more assay components. The other components may be either the test compound itself, or a combination of test compound and a natural binding partner of the marker. The test compounds of the present invention
15 may be obtained from any available source, including systematic libraries of natural and/or synthetic compounds. Test compounds may also be obtained by any of the numerous approaches in combinatorial library methods known in the art, including: biological libraries; peptoid libraries (libraries of molecules having the functionalities of peptides, but with a novel, non-peptide backbone
20 which are resistant to enzymatic degradation but which nevertheless remain bioactive; (see, e.g., Zuckermann et al., 1994, J. Med. Chem. 37:2678-85); spatially addressable parallel solid phase or solution phase libraries; synthetic library methods requiring deconvolution; the 'one-bead one-compound' library method; and synthetic library methods using affinity chromatography selection.
25 The biological library and peptoid library approaches are limited to peptide libraries, while the other four approaches are applicable to peptide, non-peptide oligomer or small molecule libraries of compounds (Lam, 1997, Anticancer Drug Des. 12:145).

Additional objects, advantages, and novel features of the present invention will become apparent to one ordinarily skilled in the art upon examination of the following examples, which are not intended to be limiting. Additionally, each of the various embodiments and aspects of the present invention as delineated hereinabove and as claimed in the claims section below finds experimental support in the following examples.

EXAMPLES

Reference is now made to the following examples, which together with the above descriptions, illustrate the invention in a non limiting fashion.

Generally, the nomenclature used herein and the laboratory procedures utilized in the present invention include molecular, biochemical, microbiological and recombinant DNA techniques. Such techniques are thoroughly explained in the literature. See, for example, "Molecular Cloning: A laboratory Manual" Sambrook et al., (1989); "Current Protocols in Molecular Biology" Volumes I-III Ausubel, R. M., ed. (1994); Ausubel et al., "Current Protocols in Molecular Biology", John Wiley and Sons, Baltimore, Maryland (1989); Perbal, "A Practical Guide to Molecular Cloning", John Wiley & Sons, New York (1988); Watson et al., "Recombinant DNA", Scientific American Books, New York; Birren et al. (eds) "Genome Analysis: A Laboratory Manual Series", Vols. 1-4, Cold Spring Harbor Laboratory Press, New York (1998); methodologies as set forth in U.S. Pat. Nos. 4,666,828; 4,683,202; 4,801,531; 5,192,659 and 5,272,057; "Cell Biology: A Laboratory Handbook", Volumes I-III Cellis, J. E., ed. (1994); "Culture of Animal Cells - A Manual of Basic Technique" by Freshney, Wiley-Liss, N. Y. (1994), Third Edition; "Current Protocols in Immunology" Volumes I-III Coligan J. E., ed. (1994); Stites et al. (eds), "Basic and Clinical Immunology" (8th Edition), Appleton & Lange, Norwalk, CT (1994); Mishell and Shiigi (eds), "Selected Methods in Cellular Immunology", W. H. Freeman and Co., New York (1980); available

immunoassays are extensively described in the patent and scientific literature, see, for example, U.S. Pat. Nos. 3,791,932; 3,839,153; 3,850,752; 3,850,578; 3,853,987; 3,867,517; 3,879,262; 3,901,654; 3,935,074; 3,984,533; 3,996,345; 4,034,074; 4,098,876; 4,879,219; 5,011,771 and 5,281,521; "Oligonucleotide Synthesis" Gait, M. J., ed. (1984); "Nucleic Acid Hybridization" Hames, B. D., and Higgins S. J., eds. (1985); "Transcription and Translation" Hames, B. D., and Higgins S. J., eds. (1984); "Animal Cell Culture" Freshney, R. I., ed. (1986); "Immobilized Cells and Enzymes" IRL Press, (1986); "A Practical Guide to Molecular Cloning" Perbal, B., (1984) and "Methods in Enzymology" Vol. 1-317, Academic Press; "PCR Protocols: A Guide To Methods And Applications", Academic Press, San Diego, CA (1990); Marshak et al., "Strategies for Protein Purification and Characterization - A Laboratory Course Manual" CSHL Press (1996); all of which are incorporated by reference as if fully set forth herein. Other general references are provided throughout this document. The procedures therein are believed to be well known in the art and are provided for the convenience of the reader. All the information contained therein is incorporated herein by reference.

MATERIALS AND METHODS

Subjects - Blood was obtained from patients or controls after written informed consent. *For comparison of healthy controls and MS patients, and between MS patients in acute relapse or remission:* Gene expression profiles of 26 patients (20 females, mean age 41.0 ± 2.5 years) with definite diagnosis of MS according to Poser criteria (8), a relapsing-remitting disease course, and brain magnetic resonance imaging ascertaining the diagnosis (9) were compared with eighteen (18) age-matched healthy subjects (16 females). *For comparison of transcriptional profiles in MOG-reactive T-cells:* Four MS female patients (mean age 38 ± 4.2 years, mean disease duration 9.3 ± 3.3 years) having a definite MS according to Poser criteria (10), a relapsing-remitting

disease course, neurological disability evaluated by the expanded disability status scale (EDSS, 11) between 2 to 5.0, and brain MRI supporting the diagnosis of MS, and three age- and sex-matched healthy controls were included in the study. None of the patients received immunomodulatory drugs or steroid treatment for at least three months prior to when blood was drawn. The studies were approved by the institutional review board and the Israel Ministry of Health.

mRNA preparation - Total RNA was isolated from Ficoll™ isolated Peripheral Blood Mononuclear Cells (PBMC) or from MOG-stimulated T cell lines (2×10^7 cells) by ice-cold TRIZOL Reagent (Gibco, BRL). Poly-A mRNA was isolated using a mini-kit (Oligotex, Qiagen) and used as a template for double-stranded cDNA synthesis using oligo (dT)-24 primers containing a T7 RNA polymerase promoter site added to the 3'- end (Genset). After phenol/chloroform extraction cDNA was used as a template for *in vitro* transcription (Ambion T7 Megascript system) with biotin labeled nucleotides (Enzo Diagnostics). Labeled cRNA was fragmented, quantified by spectrophotometer, and hybridized to the microarrays.

Microarray gene analysis - Each Genechip (U95Av2) which carries probes for 12,625 (or U133A with 22,000 for patients with probable MS diagnosis) transcripts was hybridized with $10 \mu\text{g}/200 \mu\text{l}$ hybridization mix, stained and scanned (Hewlett Packard, GeneArray-TM scanner G2500A) according to manufacturer protocol (Affymetrix Inc, Santa Clara, CA). Scaling procedure was performed to an average intensity of 600 per gene. A value of 20 was assigned to all measurements lower than 20. *For comparison of healthy controls and MS patients, and between MS patients in acute relapse or remission:* All data was normalized by dChip software and fold ratios were calculated for each gene of the samples against geometric means of the matched controls. *For comparison of transcriptional profiles in MOG-reactive T-cells:* Genes that did not have at least one average difference intensity value ≥ 100 or

were present at least once by Affymetrix criteria, were not included in the analysis.

Data analysis - The analysis was performed according to the analytical approach as previously described (24-26). Genechip 4 software (Affymetrix Inc, Santa Clara, CA) was used for analysis of the scanned arrays. Fold ratios were calculated for each gene of the samples against the geometric mean of matched controls. *For comparison of transcriptional profiles in MOG-reactive T-cells:* To determine the most informative genes threshold number of misclassifications (TNoM) score was applied. This score counts the number of classification errors that occur between compared groups for each gene of the dataset. The best threshold (TNoM=0) implies that no errors have been counted and the distinction between the two groups in relation to the expression level of a specific gene is maximal. To select a group of strongly differential expression, t-test p-value (comparing expression levels of genes from MS patients vs. healthy controls) were also computed. Genes with TNoM = 0, fold-change >1.5 (either up or down regulated) and corresponded t-test P value < 0.05, were designated as most informative. *For comparison of healthy controls and MS patients, and between MS patients in acute relapse or remission:* The data was analyzed by the classic parametric t-test, and the following non-parametric tests: (i) Threshold number of misclassifications (TNoM) method and (ii) INFO score that measures the misclassifications made by a simple threshold in terms of the information lost. Analysis was performed between MS patients and the control group for each gene of the dataset as well as between subgroups of patients. Only informative MS related genes ($p < 0.05$ in all three statistical tests) were included. To retrieve the most informative genes, the False Discovery Rate (FDR) method (14) that ranks and tests all “P” values against different thresholds was used. The degree of significance by the Bonferroni threshold method, which evaluates the allowed error probability

divided by the number of genes measured, and ensures that each and every validated scoring event is indeed a significant event, was also calculated.

Validation Strategy - To further assess the predictive power of the data sets, computerized analysis by the Leave-One-Out-Cross-Validation (LOOCV) statistical method was performed. The method simulates removal of a single sample every trial and trains on the rest. The procedure is repeated until each sample is left out once and the number of correct and incorrect predictions is counted.

EXAMPLE I***Accurate Gene Expression Profiles of MS***

In order to provide an accurate, reliable profile of gene markers for diagnosis and evaluation of MS, DNA chip analysis was used to compare multiple gene expression patterns of PBMCs from patients with different clinical forms of MS. After informed consent blood was obtained from 26 patients (20 females, mean age 41.0 ± 2.5 years) with definite diagnosis of MS according to Poser criteria, a relapsing-remitting disease course, and brain magnetic resonance imaging ascertaining the diagnosis. Eighteen age-matched healthy subjects (16 females) served as controls. PBMC gene expression of 12,625 human genes was analyzed as described hereinabove, using Ficoll™ for preparation of PBMCs and total RNA purification and sample preparation according to the instructions of Affymetrix, Inc (Affymetrix, Santa Clara CA, USA). In order to determine the most informative genes, unique computerized scoring methods, as yet not applied to analysis of data regarding MS, were employed. In brief, a gene is designated as informative based on the degree to which its tissue expression level is predictive of an independent classification of the tissue sample as “diseased” or “not diseased”, as previously described by Ben-Dor et al (J Comput Biol 2000;7:559-63) and applied to the analysis of breast cancer and melanoma using cDNA arrays (for review see Freidman N et al Ernst Schering Res Found Wkshp 2002;38:109-31). The scores used in this study were:

TNoM (Total Number of Misclassifications) - the number of classification errors committed when using the best simple threshold to distinguish between two classes (diseased or not diseased) based on the expression levels of a specific gene.

INFO - an estimate of the uncertainty remaining about accuracy of a sample classification (diseased or not diseased) after the incorporation of

predictions based on expression of an individual gene is given (a lower “INFO” score indicates a higher predictive value for a given gene).

Gaussian (t-test) - The overlap between distributions of expression levels for genes in two classes. The score is based on normality assumptions.

5 One of the advantages of the analytic methods used here is their amenability to rigorous statistical benchmarking. Using this unique analysis, the number of informative genes per score expected in a random classification can be calculated, and then this estimated number of high scoring (or informative) genes can be compared to the actual number of informative genes
10 (per score) measured in a dataset.

Comparison of the gene expression profiles shows that gene expression of PBMC in MS patients is significantly different from that in healthy subjects. Under the null-hypotheses that the separation of the samples is random despite genetic heterogeneity between tested groups, observed significant
15 overabundance of informative genes was observed (Fig. 1A). The difference between expected and observed number of genes with significant p value in all 3 statistical tests (t-test, TNoM, INFO) performed, indicates that the diversity in gene expression observed in PBMC is biologically significant.

The predictive power of the data sets results was assessed by performing
20 computerized error estimates based on *leave-one-out cross validation* (LOOCV) trials. The results disclosed only 3 classification errors. This low rate of error estimates suggest that the gene expression signature in MS is reliable for the diagnosis of the disease using peripheral blood and confirms that the patterns we observed accurately represent significant biologic phenomena
25 associated with MS. The false discovery rate (FDR) method distinguished 1249 most informative genes that pass 95% FDR on all three statistical tests (t-test, TNoM, INFO) at $p < 0.05$ (Fig. 1B and Table I).

Confirmation of gene microarray expression findings was performed by RT-PCR for the following five randomly selected genes: EGFL5, P44, GS3686,

MX1 and CCR2. Significant correlations (coefficients ranged from 0.76 to 0.98) were found between the relative number of expression genes analysis and the RT-PCR profile. The data from microarray hybridizations was further tested against the strict Bonferroni threshold method from all three statistical tests, as described hereinabove, resulting in 300 top scoring genes that distinguish between MS and healthy subjects. (Table II).

The 1249 most informative genes (681 up-regulated, 569 down-regulated, Table I) consist of inflammatory, apoptosis and cell signaling pathways components, cytokines, antigen presentation molecules and chemokines as well as number of expressed sequence tags (ESTs).

Over-expressed genes in MS - The most abundant over-expressed transcripts unique to MS include: (i) **SLAM** (signaling lymphocyte activation molecule) a member of the immunoglobulin gene superfamily that is involved in T-cell stimulation. SLAM potentiates T-cell expansion and was described as CD28 independent co-stimulatory molecule, selectively increasing interferon gamma production and dysregulating type 1 and type 2 cytokine production in MS upon T-cell receptor activation. The surprising observation of SLAM upregulation suggests an enhanced proliferation of autoreactive T cells in MS patients; (ii) **LEF1** (lymphoid enhancer-binding factor 1) one of the transcriptional factors expressed in pre-B and T cells, and known to be associated with T cell receptor (TCR) stimulation and apoptosis survival of pro-B cells (19); (iii) **LRP5** (low density lipoprotein receptor-related protein 5) a of cell receptor protein required for LEF1 activation; (iv) **LILRB** (leukocyte immunoglobulin-like receptor), a protein that binds MHC class I molecules and delivers a negative signal inhibiting killing by natural killer and regulatory T cells; (v) **LY75** (lymphocyte antigen 75) an endocytotic receptor used by dendritic cells to direct captured antigens from the extracellular space to a specialized antigen-processing compartment; and (vi) **CDW52**, a 21-28 kDa glycopeptide antigen expressed on lymphocytes and macrophages known to be

a target for complement-mediated insult, inducing pro-inflammatory cytokine (e.g. TNF alpha and interferon gamma) production. Other up-regulated genes are members of the anti-apoptotic pathways, and include **PIP5K1-gamma** (Phosphatidylinositol-4-phosphate 5-kinase, type 1, gamma) and **MAP4** (Microtubule-associated protein 4). Over-expression of transcripts belonging to the papain cysteine proteinase family **CTSK** (Cathepsin K) and **CTSB** (Cathepsin B) was also observed.

Down-regulated genes in MS - Abundant down-regulated transcripts unique to MS that were identified include **IL1B** (Interleukin 1 beta), an important inflammatory cytokine; **TRAF6**, which is essential for IL1 signaling; and **SCYA20**, known to be mediated by IL1B. Decreased mRNA expression of **IL1B** was strengthened by the down regulation of **IL1R** (type1 receptor), **IL1RAP** (receptor accessory protein) and **IL1RN** (receptor antagonist).

Other important down-regulated genes include **TGFB1** (Transforming growth Factor beta 1) and **SKI** (v-ski sarcoma viral oncogene homologue) a component of TGFB signaling pathway, both known to inhibit cell proliferation. Thus, their under expression may contribute to autoreactive T cell expansion. Members of epidermal growth factor family such as **VEGF** (Vascular endothelial growth factor), **IGFBP4** (Insulin-like growth factor binding protein 4) and **EREG** (epiregulin) were also down regulated. Additionally, mRNA expression of members of the steroid-thyroid receptors family including nuclear receptor subfamily 4, group A members 1, 2 and 3 (**NR4A1**, **NR4A2**, **NR4A3**) were significantly reduced. Down regulation of these genes may inhibit apoptosis through Fas ligand and tumor necrosis factor alpha or through early response of T-cell receptor induced apoptosis of thymocytes, thus mimicking positive selection.

Taken together, the identification of profiles of up- (overexpressed) and down regulated genes specific to MS indicates the suitability of the methods of

the present invention for identifying validated and significant molecular signatures of PBMC gene expression in MS. While reducing the present invention to practice, it was observed that the specific disease related genes include transcripts involved in T cell activation and expansion and anti-
5 apoptotic mediators, indicating failure of apoptosis-related elimination of autoreactive T cells.

EXAMPLE II

Stage Specific Gene Expression Profiles of MS

10 Accurate clinical tools for specific diagnosis of disease stages in MS are presently unavailable. In order to provide a useful profile of the clinically defined stages of MS, specific gene expression was evaluated in relation to clinical disease phases. Significant overabundance was found between the number of observed and expected genes expressed in MS patients during an
15 acute relapse and in remission (Fig. 2A). Using the methods described hereinabove, the 743 most informative genes (302 up-regulated and 441 down-regulated) with p-value < 0.05 in all three scores (t-test, TNoM, INFO) that differentiated relapse from remission (Fig 2B, Table III) were identified.

Over-expressed genes in acute relapse of MS, compared to patients in
20 ***remission*** - The most informative over-expressed genes included CTSL (Lysosomal cystein protease L, cathepsin L) known to play a role in MHC class II antigen presentation, responsible for quantitative and qualitative difference in peptide repertoires displayed by MHC class II molecules, and having a regulatory role in epitope generation for antigens subsets. Moreover, in vitro,
25 proteolytic CTSL processed myelin basic protein into more than 60 different 20-40-mers species, and myelin-associated glycoprotein was described as a substrate for CTSL like proteases. These data, taken together with our observation that CTSL mRNA was over expressed in the active stage of MS, offer a biochemical basis for the immunodominant epitope spreading

implicated in the pathogenesis of MS. Also up-regulated is **SCYA2** (Monocyte specific chemoattractant protein, MCP1), essential for monocyte and NK cells recruitment to site of inflammatory injury. Augmented **SCYA2** expression level in the CNS has been identified at the onset of EAE. Other abundant up-regulated transcripts identified by the method of the present invention include **CD79A**, **DDIT3** (DNA-damage inducible transcript 3); **E2-EPF** (Ubiquitin carrier protein) and **COX6**.

Downregulated genes in acute relapse of MS, compared to patients in remission - From the downregulated gene transcripts in acute relapse vs. remission it is important to note several programmed cell death-related genes like **CCNG1** (Cyclin G1) identified as p53 dependent apoptosis; **PDCD2** (Programmed cell death 2) expressed in immature thymocytes; and **CTLA1** (Cytotoxic T lymphocyte associated serine esterase 1), crucial for the rapid induction of apoptosis by cytotoxic cells. Also prominently downregulated during acute relapse was **JAK1** (Janus kinase 1), a protein tyrosine kinase reported to be obligatory for several cytokines receptors, important for regulation of acute cellular response.

The results of the functional annotation of the transcriptional motifs that distinguish between acute MS relapse and remission suggest that many of the genes are involved in cellular recruitment and epitope spreading, as well as important to immunologic mechanisms related to escape from regulatory surveillance and augmentation of cell survival potential. Thus, it can be suggested that during the acute inflammatory process of the disease there is a failure of the immune regulatory cells to inhibit autoreactivity and the self-expansion of the non-restrained autoreactive T cells further lead to a vicious cycle of on going inflammatory activity.

It is evident from the gene-clustering map (Fig 2B) that during an acute relapse no significant differences are found between relapse treated vs. relapse untreated patients. Such a result is of great clinical significance, since this may

indicate that during an acute MS exacerbation the major gene expression transcripts are related to relapse associated genes and the effect of therapy is negligible. However, during remission treatment effect was more pronounced and this effect on gene suppression in treated patients was evident.

5 Of even greater significance is the demonstration, for the first time, of a specific gene expression profile of the “probable” stage of MS. As described hereinabove, “probable” MS precedes definitive clinical diagnosis, and is characterized by diverse neurological symptoms including unilateral loss of vision, true vertigo, ataxia, paresthesia, incontinence, diplopia, dysarthria or
10 paralysis. Probable MS patients may suffer undiagnosed for years. In order to provide a method for accurate diagnosis of probable MS, in advance of onset of clinical symptoms, gene expression in PBMC samples of 13 probable MS patients were compared with that of samples from 5 age-matched healthy controls. RNA preparation, hybridization to MicroArray and analysis of results
15 was performed as described for Examples 1 and 2, and in the Material and Methods section hereinabove.

As is shown in Table V, a specific “probable” MS profile of gene expression distinguishes PBMCs of diseased and healthy individuals.

Thus, there is demonstrated, for the first time, gene expression profiles
20 providing criteria for distinguishing between stages of MS in humans, for example, between relapsing and remitting MS, probable MS and healthy individuals. Further, the groups of up- and down-regulated genes identified herein may be used for investigation of mechanisms of disease and disease progression in MS.

25

EXAMPLE III

Gene Expression Profiles in Treatment of MS

The effect of immunomodulatory treatment on gene expression in MS patients was investigated by comparison analysis of gene transcripts between

treated and untreated patients. Suprisingly, despite the variety of immunomodulatory treatments and differences between patients in relation to treatment duration, the microarray methods described herein, treatment-related gene transcripts that differentiated between treated and untreated patients were
5 detected. Treatment-specific gene expression is mainly associated with phosphorylation and signal transduction. Thus, gene microarray technology can be a powerful tool in evaluating and monitoring clinical correlations of effects of treatment, and determining prognosis.

Thus, data presented herein demonstrate for the first time distinct and
10 significant fingerprint cluster in MS patients that differentiates them from healthy subjects. Moreover, the stringent and specific fingerprint is predictive for the diagnosis of MS and is suitable for guiding the selection of patients for early treatment. Additionally, separate gene expression patterns were identified between acute MS relapse and remission, and treatment effects could also be
15 identified. The methods described herein may also be used to offer superior insight into the biological mechanisms involved in the disease as well as improving functional gene characterization and transcription sites detection, important for identification of new targets for treatment and drug identification, such as T cell activation and expansion and anti-apoptotic genes like **SLAM**,
20 **PIP5K1-g** and the **NR4A1-3** steroid-thyroid receptors subfamily.

EXAMPLE IV

Gene Expression Profiles of MOG-Reactive T-cells from MS Patients

Although MS appears to be caused by autoimmune T cells activated
25 against myelin self-antigens, myelin-reactive T-cells have been demonstrated in healthy subjects as well. Thus, distinction between disease-related and non-disease related T-cell myelin reactivity is of great clinical and investigational importance. In order to determine a profile of MS-related T-cell genes, gene expression in MOG-reactive T-cells from 4 MS patients having relapsing-

remitting disease course, positive Poser criteria, and neurological disability, and 3 healthy age-matched controls was compared.

Using the microarray methods described herein, gene expression patterns obtained in MOG reactive T cell lines from MS patients detected 150 transcripts with $TNoM=0$, $p=0.057$ compared to healthy subjects (Figure 4). These high scoring gene transcripts were defined as significant MOG reactive MS-related genes. Hierarchical clustering of gene expression patterns from MS patients and healthy controls is presented in Figure 2, panel A. From the 150 genes with absolutely different expression levels, 43 most informative genes were further identified and clustered. These include 18 up-regulated and 25 down-regulated genes (Figure 2, panel B).

Investigation of the known biological function of these genes (Table V) shows a great diversity of activity (A Pie-chart diagram showing the functional groups of genes included in this evaluation is presented in Figure 3). Included are genes coding for proteins involved in the regulation and execution of apoptosis, growth factors, mediators of signal transduction pathways, molecules that participate in inflammation and also genes encoding heat shock proteins, transcription factors and components of different biochemical pathways.

Upregulated Genes in MS-Derived T-cells - Up-regulated in MS patient-derived T-cell lines are several anti-apoptotic genes such as **BCL2**, **lifeguard**, and the MAP-activated kinase **MAP3K12**. The **BCL2** gene product is an important member of the anti-apoptotic proteins. Lifeguard (**LFG**), is a molecule that inhibits cell death mediated by the Fas (CD95) receptor through a unique mechanism that down regulates apoptotic signals from Fas and is associated with human autoimmune lymphoproliferative syndrome (ALPS) and in lymphoproliferative lupus-like syndrome in mice.

The **MAP3K12** gene is associated with programmed cell death and encodes a polypeptide that catalyzes the phosphorylation of **BAD**, a member of the **BCL2** anti-apoptosis protein family. Increased expression of **IGFBP3** and

VEGF was also demonstrated in MS-derived T cells. IGFBP-3 has been implicated in the expansion of disease related T-cell, associated with acute brain lesions of MS patients. Thus, in addition to increased survival potential, our findings suggest that autoreactive T cells in MS also have an expansion
5 advantage compared with T cells from healthy individuals.

Furthermore, migration of autoimmune T cells into the brain would be expected to be assisted by over-expression of transcripts encoding for vascular endothelial growth factor (VEGF) in lines from MS patients. VEGF enhances vascular permeability and may facilitate migration of lymphocytes into the CNS
10 and induction of inflammatory reactions in the brain.

Downregulated Genes in MS-Derived T-cells - The profile of gene expression in MS-derived T-cells (Figure 4, and Table V) indicates a suppression of apoptosis-related functions in the diseased state. One aspect of failure to induce apoptosis in the MS-derived T cell lines is the significant
15 down-regulation of the gene encoding for the pro-apoptotic molecule TNF. A reduction in TNF could also contribute to a reduction in the ratio of pro- and anti-apoptotic transcript expression in the anti-MOG T cell lines from MS patients compared to healthy controls. Indeed, inadequate apoptosis present in MS autoreactive T cell lines could lead to insufficient deletion of autoimmune
20 activated T cell clones and increase susceptibility to autoimmunity.

In addition, effectors of MHC class I presentation were revealed to be down-regulated in MS patients' cells. Such down-regulated expression includes the transcript for the **proteasome PA28 complex**, known to be a principal provider of MHC class I-presented peptides in antigen presenting cells, and
25 **HSP70 1A and 1B** variants. TNF is also known to stimulate MHC class I presentation in addition to induction of apoptosis. The findings presented herein indicate that a weaker antigenic MHC class I presenting capability might distinguish MS-patient derived T cell lines from their healthy counterparts, and providing powerful diagnostic tools. It is conceivable that a lower expression of

MHC class-I on CD4 autoimmune T cells might enable them to escape regulation by CD8 cells that recognize autoimmune idiotypes.

Taken together the combined effects of down-regulation of apoptosis associated genes, up regulation of anti-apoptotic genes, increased expansion capability by autoreactive T cells and enhanced ability to penetrate the CNS may lead to perpetuated pathologic cellular proliferation and tissue destruction within the CNS characteristic of MS, along with increased resistance to regulation. The specific gene expression profiles described herein can define some of the requirements for an individual to develop MS, and thus have important predictive value, especially in determining MS in the “probable” stage. It is noteworthy that despite activation in vitro with the same MOG epitope, anti-MOG T cells from healthy subjects did not attain the gene expression profile that characterized the MS patient-derived cells. The findings support the concept that not all autoimmune T cells are equal; autoimmune T cells from MS patients follow a unique pattern of T cell activation that appears to be more resilient to apoptosis and can support long term survival. Although T cell lines derived from MS patients and healthy donors responded to the same autoantigen, were both activated T cell populations that proliferated extensively in the presence of IL-2, the gene expression imprints that are unique to each group were preserved. These findings indicate the existence of different T-cell activation mechanisms. The nature of the stimuli that generate aberrant autoimmune T-cell gene expression has yet to be identified in order to determine whether their formation is merely the result of the chronic immune stimulation driven by other factors in MS, or whether such T cells function as primary drivers of the MS process. Characterization of such driver T cells, dictating the state of immunity/autoimmunity can also greatly contribute to understanding autoimmunity and possibly also for designing effective treatments for MS.

TABLES I-V

Table I: Gene Expression Profile from PBMCs of MS vs. Healthy

SEQ ID NO:	Identifier	TNOM PValue	Info PValue	t-Test PValue	Log Fold Change	Symbol
<u>1</u>	U78107	8.55E-11	1.94E-11	4.04E-12	-0.43769	NAPG
<u>2</u>	M15330	8.55E-11	8.55E-11	2.49E-12	-2.13825	IL1B
<u>3</u>	X15218	8.55E-11	8.55E-11	1.40E-10	-1.41501	SKI
<u>4</u>	AF024710	8.55E-11	8.55E-11	1.13E-12	-1.95537	VEGF
<u>5</u>	U09937	1.84E-09	4.16E-10	2.04E-09	-1.21578	HSUROKR7
<u>6</u>	AB018343	1.84E-09	4.16E-10	9.05E-12	0.383078	KIAA0800
<u>7</u>	X74039	1.84E-09	4.16E-10	1.51E-10	-0.67381	PLAUR
<u>8</u>	M64571	1.84E-09	1.84E-09	2.41E-11	0.416659	MAP4
<u>9</u>	U64197	1.84E-09	1.84E-09	2.95E-10	-0.62373	SCYA20
<u>10</u>	X68452	2.57E-08	2.93E-09	9.12E-11	-0.26618	CCND2
<u>11</u>	AB011161	2.57E-08	2.93E-09	9.64E-11	0.63432	PIP5K1C
<u>12</u>	L47738	2.57E-08	2.93E-09	7.54E-09	0.31646	PIR121
<u>13</u>	U78798	2.57E-08	2.93E-09	1.11E-06	-0.3172	TRAF6
<u>14</u>	M63904	2.57E-08	7.16E-09	5.38E-09	-0.59612	GNA15
<u>15</u>	U72066	2.57E-08	7.16E-09	4.33E-08	-0.34482	RBBP8
<u>16</u>	AI184802	2.64E-07	1.61E-08	2.67E-09	-0.21576	HPRP4P
<u>17</u>	AF077820	2.64E-07	1.61E-08	2.91E-08	0.656852	LRP5
<u>18</u>	L13740	2.64E-07	1.61E-08	5.83E-08	-1.45891	NR4A1
<u>19</u>	AL008583	2.64E-07	1.61E-08	1.12E-08	0.250082	
<u>20</u>	Z24724	2.64E-07	1.61E-08	5.96E-09	-1.10426	
<u>21</u>	D30783	2.57E-08	2.19E-08	8.95E-10	-1.65011	EREG
<u>22</u>	U47927	2.57E-08	2.19E-08	5.53E-09	0.545592	USP5
<u>23</u>	AI560890	2.57E-08	2.19E-08	1.80E-07	0.179028	
<u>24</u>	Y00630	2.57E-08	3.69E-08	6.65E-09	-2.38485	SERPINB2
<u>25</u>	N90866	2.64E-07	8.23E-08	2.76E-08	0.304525	CDW52
<u>26</u>	AF022375	2.64E-07	8.23E-08	1.87E-11	-1.35847	VEGF
<u>27</u>	M24895	2.11E-06	1.08E-07	1.72E-08	0.476779	AMY2B
<u>28</u>	AF054176	2.11E-06	1.08E-07	6.47E-09	-0.58138	C1orf7
<u>29</u>	L20941	2.64E-07	1.08E-07	1.78E-06	-0.58618	FTH1
<u>30</u>	L05424	2.11E-06	1.08E-07	2.27E-09	-0.58081	HUMSCG19
<u>31</u>	AB002347	2.11E-06	1.08E-07	7.19E-10	0.371731	KIAA0349
<u>32</u>	AB023153	2.11E-06	1.08E-07	1.82E-08	0.895842	KIAA0936
<u>33</u>	AF069517	2.11E-06	1.08E-07	4.91E-07	0.399638	RBM6
<u>34</u>	X69392	2.64E-07	1.08E-07	1.10E-08	0.297444	RPL26
<u>35</u>	U51920	2.11E-06	1.08E-07	7.01E-08	-0.28142	SRP54
<u>36</u>	L22075	2.64E-07	1.71E-07	1.10E-08	-0.55736	GNA13
<u>37</u>	X04500	2.64E-07	1.71E-07	3.43E-10	-2.12121	IL1B
<u>38</u>	AB028951	2.64E-07	1.71E-07	8.78E-09	0.543028	KIAA1028
<u>39</u>	AF004230	2.64E-07	1.71E-07	3.06E-07	0.349166	LILRB1
<u>40</u>	AF070582	2.64E-07	1.71E-07	3.23E-08	-0.19773	MGC13033

ANNOTATED MARKED-UP SPECIFICATION

41	X66363	2.64E-07	1.71E-07	6.53E-07	-0.24505	PCTK1
42	L33881	2.64E-07	1.71E-07	5.06E-08	-0.59585	PRKCI
43	U33017	2.64E-07	1.71E-07	5.20E-07	0.373581	SLAM
44	AJ007042	2.64E-07	1.71E-07	2.10E-07	0.170935	WHSC1
45	Z93930	2.64E-07	1.71E-07	2.42E-05	-0.39839	XBP1
46	AF079167	2.64E-07	1.71E-07	7.37E-10	-1.93249	
47	AF098641	2.64E-07	1.71E-07	1.56E-07	-0.41172	
48	HG3227-HT3404	2.64E-07	1.71E-07	1.68E-08	-0.25361	
49	U78302	2.64E-07	1.71E-07	2.41E-08	0.329878	
50	U91543	2.64E-07	2.49E-07	2.01E-07	0.478678	CHD3
51	M22919	2.64E-07	2.49E-07	9.52E-08	-0.81053	MYL6
52	AB029015	2.64E-07	2.49E-07	5.37E-09	0.695063	PLCE2
53	Z11697	1.37E-05	4.08E-07	3.55E-06	-1.21033	CD83
54	AL096780	1.37E-05	4.08E-07	2.13E-06	0.34487	CHKL
55	U51205	1.37E-05	4.08E-07	2.65E-07	-0.76279	COP9
56	Y08683	1.37E-05	4.08E-07	4.71E-06	0.492738	CPT1B
57	S52028	2.11E-06	4.08E-07	9.62E-08	-0.81662	CTH
58	X63368	2.11E-06	4.08E-07	2.30E-08	-0.55432	DNAJB2
59	M84443	1.37E-05	4.08E-07	4.08E-07	0.303567	GALK2
60	U32324	1.37E-05	4.08E-07	3.21E-08	0.334966	IL11RA
61	AB011115	1.37E-05	4.08E-07	3.39E-07	0.382809	KIAA0543
62	AB014535	1.37E-05	4.08E-07	1.04E-06	0.285282	KIAA0635
63	X02152	1.37E-05	4.08E-07	4.63E-08	-0.75601	LDHA
64	AF007130	2.11E-06	4.08E-07	2.51E-06	0.391811	LOC54104
65	AF007151	1.37E-05	4.08E-07	3.25E-06	0.468343	MMS19L
66	X82209	2.11E-06	4.08E-07	1.37E-09	-0.45281	MNI
67	X79882	1.37E-05	4.08E-07	1.78E-07	0.520965	MVP
68	U91616	1.37E-05	4.08E-07	1.27E-07	-0.80419	NFKBIE
69	U41815	1.37E-05	4.08E-07	2.16E-07	-0.96931	NUP98
70	AB011108	1.37E-05	4.08E-07	4.39E-07	0.453498	PRP4
71	L40377	1.37E-05	4.08E-07	3.49E-07	-0.79409	SERPINB8
72	X99656	1.37E-05	4.08E-07	1.68E-06	-0.23553	SH3GL1
73	AJ010059	2.11E-06	4.08E-07	2.95E-06	0.2235	SIT
74	J02973	1.37E-05	4.08E-07	2.93E-07	-1.30804	THBD
75	N90862	1.37E-05	4.08E-07	3.28E-08	0.43576	VAMP8
76	Y14768	1.37E-05	4.08E-07	7.26E-08	0.248383	
77	U47414	2.11E-06	7.73E-07	2.31E-06	0.370736	CCNG2
78	AB002386	2.11E-06	7.73E-07	5.34E-09	0.586117	EZH1
79	U29344	2.11E-06	7.73E-07	2.35E-07	-0.43842	FASN
80	AF015553	2.11E-06	7.73E-07	2.61E-07	0.61214	GTF2I
81	AB028981	2.11E-06	7.73E-07	5.34E-07	0.282288	KIAA1058
82	U29656	2.11E-06	7.73E-07	7.52E-08	0.353186	NME3
83	X00737	2.11E-06	7.73E-07	5.21E-08	-0.67074	NP
84	U29185	2.11E-06	7.73E-07	1.56E-07	-1.08006	PRNP
85	AB007960	2.11E-06	7.73E-07	7.96E-06	0.447772	SH3GLB1

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86	U44839	2.11E-06	7.73E-07	2.54E-07	-0.97008	USP11
87	U84007	7.44E-05	1.28E-06	0.00023 5	0.236422	AGL
88	S78187	7.44E-05	1.28E-06	1.95E-05	0.203265	CDC25B
89	X82153	7.44E-05	1.28E-06	2.27E-06	0.47844	CTSK
90	AL050084	7.44E-05	1.28E-06	5.26E-05	0.509331	DC8
91	X62535	1.37E-05	1.28E-06	5.68E-07	0.243937	DGKA
92	AB026436	7.44E-05	1.28E-06	0.00021 9	-0.7589	DUSP10
93	M98833	7.44E-05	1.28E-06	1.52E-06	0.434288	FLI1
94	AW051579	1.37E-05	1.28E-06	7.58E-07	0.593476	FLJ10512
95	X16706	7.44E-05	1.28E-06	1.23E-06	-1.09747	FOSL2
96	U90917	1.37E-05	1.28E-06	3.89E-07	0.433406	FOXMI
97	M24194	7.44E-05	1.28E-06	4.38E-06	0.560895	GNB2L1
98	AJ002190	7.44E-05	1.28E-06	2.17E-08	0.33775	GNPAT
99	X87949	7.44E-05	1.28E-06	4.05E-07	-0.54468	HSPA5
100	U96876	7.44E-05	1.28E-06	3.54E-06	-0.45317	INSIG1
101	AF038564	1.37E-05	1.28E-06	2.05E-07	-0.40446	ITCH
102	D80011	7.44E-05	1.28E-06	4.20E-07	-0.35073	KIAA0189
103	AI950382	1.37E-05	1.28E-06	1.63E-07	-0.74128	KIAA0585
104	AB023235	7.44E-05	1.28E-06	1.43E-05	0.311216	KIAA1018
105	AB029038	7.44E-05	1.28E-06	7.62E-05	0.364386	KIAA1115
106	U24166	7.44E-05	1.28E-06	7.52E-06	-0.45293	MAPRE1
107	X61498	7.44E-05	1.28E-06	8.80E-07	-0.49884	NFKB2
108	U12767	7.44E-05	1.28E-06	2.84E-07	-1.23483	NR4A3
109	U85245	7.44E-05	1.28E-06	4.57E-07	0.365266	PIP5K2B
110	U50928	7.44E-05	1.28E-06	4.72E-06	0.302213	PKD2
111	U13695	7.44E-05	1.28E-06	1.11E-05	0.805607	PMS1
112	AA203527	1.37E-05	1.28E-06	1.18E-07	0.281992	RPP20
113	J02939	7.44E-05	1.28E-06	2.16E-07	-0.87844	SLC3A2
114	N30151	7.44E-05	1.28E-06	5.05E-05	0.393521	STX16
115	U52960	2.11E-06	1.28E-06	1.51E-07	-0.84863	SURB7
116	AF030249	1.37E-05	1.28E-06	1.98E-07	0.534547	
117	AL022398	7.44E-05	1.28E-06	8.09E-08	0.919627	
118	HG1103-HT1103	1.37E-05	1.28E-06	1.16E-07	-0.39165	
119	D30758	2.11E-06	1.80E-06	1.58E-05	0.27738	CENTB1
120	U75968	2.11E-06	1.80E-06	4.36E-06	0.139542	DDX11
121	M69199	2.11E-06	1.80E-06	1.45E-07	-1.9021	G0S2
122	U20982	2.11E-06	1.80E-06	1.20E-08	-0.67125	IGFBP4
123	AF040707	2.11E-06	1.80E-06	3.57E-07	0.289845	NPR2L
124	AB007927	2.11E-06	1.80E-06	2.12E-07	0.323787	RERE
125	AA902713	2.11E-06	1.80E-06	1.44E-06	0.474378	
126	U66063	2.11E-06	2.24E-06	4.70E-07	0.277185	CAMK2G
127	D13891	2.11E-06	2.24E-06	4.57E-05	-0.20577	ID2
128	AL050087	2.11E-06	2.24E-06	1.27E-07	-0.31279	KIAA1785
129	N23137	2.11E-06	2.24E-06	2.06E-07	0.247311	MPHOSPH9

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<u>130</u>	N42007	2.11E-06	2.24E-06	9.19E-05	0.167986	NUP50
<u>131</u>	M74525	2.11E-06	2.24E-06	3.50E-07	-0.61792	UBE2B
<u>132</u>	AF035281	2.11E-06	2.24E-06	4.87E-07	0.472445	
<u>133</u>	U11732	1.37E-05	3.17E-06	3.04E-07	-0.22574	ETV6
<u>134</u>	AB002348	1.37E-05	3.17E-06	2.49E-07	0.576346	KIAA0350
<u>135</u>	AB007891	1.37E-05	3.17E-06	3.99E-05	0.196376	KIAA0431
<u>136</u>	AI754391	1.37E-05	3.17E-06	1.72E-06	-0.27657	KLF12
<u>137</u>	D50406	1.37E-05	3.17E-06	2.65E-05	0.461907	RECK
<u>138</u>	AF070617	1.37E-05	3.17E-06	3.23E-07	0.323494	
<u>139</u>	M23114	2.11E-06	4.08E-06	1.59E-07	-0.96141	ATP2A2
<u>140</u>	AF014958	2.11E-06	4.08E-06	1.05E-07	-0.42152	CCRL2
<u>141</u>	AF067853	1.37E-05	4.31E-06	5.02E-06	0.361707	ADSL
<u>142</u>	M73547	1.37E-05	4.31E-06	9.20E-08	0.438897	D5S346
<u>143</u>	W28319	1.37E-05	4.31E-06	1.50E-05	0.294631	FBLN1
<u>144</u>	AB007895	1.37E-05	4.31E-06	9.61E-07	0.186643	KIAA0435
<u>145</u>	AB014579	1.37E-05	4.31E-06	6.08E-08	0.367966	MGEA5
<u>146</u>	AF019083	1.37E-05	4.31E-06	8.34E-07	0.17011	PTENP1
<u>147</u>	AL080141	1.37E-05	4.31E-06	2.42E-07	0.330868	SEC31B-1
<u>148</u>	AF110377	1.37E-05	4.31E-06	3.05E-05	0.361232	TRRAP
<u>149</u>	AB002448	1.37E-05	4.31E-06	2.45E-07	0.468926	
<u>150</u>	AL049787	1.37E-05	4.31E-06	7.11E-06	0.311278	
<u>151</u>	U50527	1.37E-05	4.31E-06	5.11E-06	0.416543	
<u>152</u>	Z32860	1.37E-05	4.31E-06	7.81E-06	0.133192	
<u>153</u>	AF094481	1.37E-05	5.01E-06	2.74E-07	-0.29045	CGGBP1
<u>154</u>	U29171	1.37E-05	5.01E-06	1.10E-06	-0.6032	CSNK1D
<u>155</u>	AL050196	1.37E-05	5.01E-06	2.00E-05	-0.24688	DKFZP586D222 3
<u>156</u>	U48807	1.37E-05	5.01E-06	4.97E-08	-0.93178	DUSP4
<u>157</u>	U15552	1.37E-05	5.01E-06	1.67E-05	-0.68094	HSU15552
<u>158</u>	L13740	1.37E-05	5.01E-06	9.10E-08	-0.61928	NR4A1
<u>159</u>	AF010309	1.37E-05	5.01E-06	7.36E-07	-0.28533	PIG3
<u>160</u>	Y18004	1.37E-05	5.01E-06	4.19E-07	-0.9465	SCML2
<u>161</u>	R90942	1.37E-05	5.01E-06	1.05E-05	-0.17696	ST6GALNACIV
<u>162</u>	W28612	1.37E-05	5.01E-06	1.70E-06	-0.25519	
<u>163</u>	X64330	7.44E-05	6.03E-06	2.27E-06	0.297851	ACLY
<u>164</u>	U49844	7.44E-05	6.03E-06	3.67E-07	0.47168	ATR
<u>165</u>	AB015019	7.44E-05	6.03E-06	2.75E-07	-0.24515	BAIAP2
<u>166</u>	AF006513	0.000344	6.03E-06	4.48E-05	-1.45973	CHD1
<u>167</u>	U56998	0.000344	6.03E-06	3.70E-06	-0.74294	CNK
<u>168</u>	S68134	0.000344	6.03E-06	8.37E-07	-1.64652	CREM
<u>169</u>	S68134	0.000344	6.03E-06	4.35E-06	-2.47105	CREM
<u>170</u>	S68271	0.000344	6.03E-06	3.03E-06	-2.07185	CREM
<u>171</u>	AF021819	0.000344	6.03E-06	4.41E-05	0.298771	DJ-1
<u>172</u>	AF029777	1.37E-05	6.03E-06	8.27E-07	0.290159	GCN5L2
<u>173</u>	U28811	0.000344	6.03E-06	1.33E-06	0.32855	GLG1
<u>174</u>	S81914	0.000344	6.03E-06	4.18E-07	-1.59146	IER3

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<u>175</u>	X80821	0.000344	6.03E-06	8.51E-05	-0.5606	KIAA0874
<u>176</u>	L06895	7.44E-05	6.03E-06	1.12E-05	-0.1928	MAD
<u>177</u>	D78579	1.37E-05	6.03E-06	4.25E-07	-1.65638	NR4A3
<u>178</u>	D78579	7.44E-05	6.03E-06	9.62E-07	-1.61438	NR4A3
<u>179</u>	U12767	0.000344	6.03E-06	2.55E-07	-2.13744	NR4A3
<u>180</u>	M95678	0.000344	6.03E-06	2.00E-06	0.432923	PLCB2
<u>181</u>	X51804	0.000344	6.03E-06	7.23E-05	-0.19283	PMI
<u>182</u>	W28743	0.000344	6.03E-06	2.78E-06	-0.28926	PP1628
<u>183</u>	X17042	7.44E-05	6.03E-06	6.64E-06	-0.36481	PRG1
<u>184</u>	M80244	0.000344	6.03E-06	2.72E-06	-0.8522	SLC7A5
<u>185</u>	AF001294	1.37E-05	6.03E-06	1.23E-06	-0.76359	TSSC3
<u>186</u>	D49677	7.44E-05	6.03E-06	4.18E-06	0.198707	U2AF1RS2
<u>187</u>	AB011004	0.000344	6.03E-06	1.41E-06	-1.34073	UAP1
<u>188</u>	AB011113	1.37E-05	6.03E-06	3.74E-07	0.444795	WDR7
<u>189</u>	AC002394	0.000344	6.03E-06	0.00147 3	0.17105	
<u>190</u>	AL021707	0.000344	6.03E-06	4.95E-06	-2.21462	
<u>191</u>	AL022398	7.44E-05	6.03E-06	1.10E-07	0.79713	
<u>192</u>	AL049442	0.000344	6.03E-06	8.09E-06	0.621935	
<u>193</u>	U17760	0.000344	6.03E-06	4.25E-06	-0.84472	
<u>194</u>	L22569	1.37E-05	8.66E-06	1.52E-06	0.318129	CTSB
<u>195</u>	AL031058	1.37E-05	8.66E-06	0.00037 5	0.149046	DSP
<u>196</u>	AL080172	1.37E-05	8.66E-06	1.89E-05	0.098968	FLJ21919
<u>197</u>	M36821	1.37E-05	8.66E-06	2.21E-07	-0.36334	GRO3
<u>198</u>	U06631	1.37E-05	8.66E-06	1.31E-05	0.486332	H326
<u>199</u>	L16499	1.37E-05	8.66E-06	5.12E-06	0.374296	HHEX
<u>200</u>	X53586	1.37E-05	8.66E-06	3.40E-07	0.51291	ITGA6
<u>201</u>	D87466	1.37E-05	8.66E-06	1.49E-07	0.466046	KIAA0276
<u>202</u>	N98667	1.37E-05	8.66E-06	3.38E-07	0.367127	KIAA1696
<u>203</u>	X99142	1.37E-05	8.66E-06	1.24E-06	-0.29773	KRTHB6
<u>204</u>	AF011333	1.37E-05	8.66E-06	1.55E-05	0.342503	LY75
<u>205</u>	U70735	1.37E-05	8.66E-06	1.82E-06	0.249185	MOV34-34KD
<u>206</u>	U02020	1.37E-05	8.66E-06	1.37E-06	-1.13863	PBEF
<u>207</u>	M31724	1.37E-05	8.66E-06	0.00017 2	-0.2601	PTPN1
<u>208</u>	U29175	1.37E-05	8.66E-06	1.90E-06	0.266342	SMARCA4
<u>209</u>	AL031846	1.37E-05	8.66E-06	0.00041 8	0.38404	
<u>210</u>	Y12059	7.44E-05	1.51E-05	5.64E-06	-0.46008	BRD4
<u>211</u>	U49187	7.44E-05	1.51E-05	1.48E-06	0.671467	C6orf32
<u>212</u>	X66945	7.44E-05	1.51E-05	1.91E-07	-0.35494	FGFR1
<u>213</u>	M60922	7.44E-05	1.51E-05	4.47E-08	0.39657	FLOT2
<u>214</u>	AL049409	7.44E-05	1.51E-05	1.10E-06	0.714173	LEF1
<u>215</u>	L16794	7.44E-05	1.51E-05	2.23E-05	-0.27553	MEF2D
<u>216</u>	U77735	7.44E-05	1.51E-05	5.66E-06	0.574142	PIM2

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<u>217</u>	U10117	7.44E-05	1.51E-05	4.07E-06	0.563673	SCYE1
<u>218</u>	AF023614	1.37E-05	1.51E-05	4.79E-07	-0.20744	TACI
<u>219</u>	S73591	1.37E-05	1.51E-05	4.68E-06	0.414777	VDUP1
<u>220</u>	AF052160	7.44E-05	1.51E-05	1.67E-06	0.623021	
<u>221</u>	L76528	7.44E-05	1.51E-05	6.14E-06	-0.39652	
<u>222</u>	U51007	7.44E-05	1.51E-05	1.49E-06	0.309996	
<u>223</u>	D10704	1.37E-05	1.75E-05	4.69E-07	-0.36791	CHK
<u>224</u>	U97105	1.37E-05	1.75E-05	6.56E-07	1.00615	DPYSL2
<u>225</u>	U03634	1.37E-05	1.75E-05	1.00E-06	-0.21467	LBC
<u>226</u>	L13773	1.37E-05	1.75E-05	6.44E-07	0.247919	MLLT2
<u>227</u>	M31523	1.37E-05	1.75E-05	2.09E-06	0.36898	TCF3
<u>228</u>	AL023553	1.37E-05	1.75E-05	2.51E-06	0.226635	
<u>229</u>	W25984	7.44E-05	2.35E-05	1.42E-05	0.482493	ACTA1
<u>230</u>	U78521	0.000344	2.35E-05	2.53E-05	0.320909	AIP
<u>231</u>	M30704	0.000344	2.35E-05	1.65E-05	-0.37795	AREG
<u>232</u>	X91504	0.001377	2.35E-05	0.00016	0.233217	ARFRP1
<u>233</u>	U51478	7.44E-05	2.35E-05	6.10E-07	-0.58	ATP1B3
<u>234</u>	U21551	0.001377	2.35E-05	7.60E-05	-0.3088	BCAT1
<u>235</u>	AB004066	0.000344	2.35E-05	6.57E-05	-0.60905	BHLHB2
<u>236</u>	M59040	0.001377	2.35E-05	2.82E-06	-0.46271	CD44
<u>237</u>	M91670	0.001377	2.35E-05	0.00164 9	-0.47538	E2-EPF
<u>238</u>	U43774	0.000344	2.35E-05	8.80E-07	-0.39938	FCAR
<u>239</u>	AW024285	0.000344	2.35E-05	6.99E-06	-0.42098	FLJ12443
<u>240</u>	AA780049	7.44E-05	2.35E-05	7.39E-07	0.54912	FLJ21439
<u>241</u>	AI935146	0.000344	2.35E-05	2.05E-06	-0.46726	GALNT3
<u>242</u>	AJ011679	0.001377	2.35E-05	4.67E-05	0.243248	GAPCENA
<u>243</u>	AI670100	7.44E-05	2.35E-05	7.70E-07	0.22677	GRLF1
<u>244</u>	D87119	7.44E-05	2.35E-05	1.80E-06	0.425625	GS3955
<u>245</u>	M92432	0.000344	2.35E-05	4.31E-05	0.363033	GUCY2D
<u>246</u>	D50405	0.001377	2.35E-05	0.00068 8	0.387926	HDAC1
<u>247</u>	U07563	7.44E-05	2.35E-05	4.91E-07	-0.25016	HSABLGR3
<u>248</u>	Y10313	0.001377	2.35E-05	0.00320 1	-0.35345	IFRD1
<u>249</u>	D63485	0.000344	2.35E-05	9.04E-05	0.31177	IKKE
<u>250</u>	L08488	0.000344	2.35E-05	7.54E-06	-0.37883	INPP1
<u>251</u>	X06256	1.37E-05	2.35E-05	4.89E-07	-0.7357	ITGA5
<u>252</u>	D42084	0.001377	2.35E-05	7.39E-06	0.222195	KIAA0094
<u>253</u>	D43947	7.44E-05	2.35E-05	0.00010 4	0.269941	KIAA0100
<u>254</u>	AB007870	0.000344	2.35E-05	0.00010 8	-0.64362	KIAA0410
<u>255</u>	AI950382	0.000344	2.35E-05	0.00012 2	-0.65985	KIAA0585
<u>256</u>	AB014548	7.44E-05	2.35E-05	2.77E-05	0.431229	KIAA0648
<u>257</u>	AB018297	0.001377	2.35E-05	0.00083	0.195704	KIAA0754

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<u>258</u>	AI970189	0.000344	2.35E-05	6.16E-07	-0.75934	KIAA0997
<u>259</u>	L04733	0.001377	2.35E-05	8.84E-07	0.306455	KNS2
<u>260</u>	AF010193	7.44E-05	2.35E-05	1.26E-07	-1.4705	MADH7
<u>261</u>	U18919	7.44E-05	2.35E-05	1.05E-05	0.271231	NBP
<u>262</u>	U85430	0.001377	2.35E-05	0.000315	0.317554	NFATC3
<u>263</u>	S76638	7.44E-05	2.35E-05	7.47E-07	-0.35416	NFKB2
<u>264</u>	AL050353	0.000344	2.35E-05	4.42E-06	0.179352	OIP2
<u>265</u>	L20971	0.001377	2.35E-05	0.00089	-0.49725	PDE4B
<u>266</u>	AF060502	7.44E-05	2.35E-05	0.000114	-0.18239	PEX10
<u>267</u>	X80497	0.001377	2.35E-05	0.000245	0.313262	PHKA2
<u>268</u>	AL050371	0.000344	2.35E-05	3.70E-06	0.493288	PISD
<u>269</u>	U77718	7.44E-05	2.35E-05	6.60E-06	0.352996	PNN
<u>270</u>	U52427	0.001377	2.35E-05	0.000282	0.329478	POLR2G
<u>271</u>	U94778	0.000344	2.35E-05	1.18E-05	0.282929	PSTPIP1
<u>272</u>	U48296	0.001377	2.35E-05	0.00011	-0.89871	PTP4A1
<u>273</u>	M31166	0.001377	2.35E-05	0.000256	-0.38484	PTX3
<u>274</u>	AJ001016	7.44E-05	2.35E-05	1.08E-05	-0.28245	RAMP3
<u>275</u>	AF040965	0.001377	2.35E-05	0.001101	-0.38591	RES4-25
<u>276</u>	J04130	0.000344	2.35E-05	3.02E-06	-0.62071	SCYA4
<u>277</u>	U81800	0.000344	2.35E-05	4.28E-05	-0.49523	SLC16A3
<u>278</u>	AB000734	0.001377	2.35E-05	0.000883	-0.58764	SSI-1
<u>279</u>	U38847	7.44E-05	2.35E-05	9.91E-07	0.222946	TARBP1
<u>280</u>	M63180	0.001377	2.35E-05	1.03E-05	-0.33301	TARS
<u>281</u>	D15050	0.001377	2.35E-05	0.000192	-1.12874	TCF8
<u>282</u>	M12959	7.44E-05	2.35E-05	1.61E-06	0.128482	TRA@
<u>283</u>	X00734	0.001377	2.35E-05	0.000384	-0.34516	TUBB5
<u>284</u>	AJ001340	0.001377	2.35E-05	4.21E-05	0.181208	U3-55K
<u>285</u>	Y08614	0.001377	2.35E-05	6.92E-05	0.305659	XPO1
<u>286</u>	AF054589	0.000344	2.35E-05	1.98E-06	0.945394	
<u>287</u>	AL022398	7.44E-05	2.35E-05	2.40E-06	0.493166	
<u>288</u>	AL031178	7.44E-05	2.35E-05	3.18E-05	0.410068	
<u>289</u>	AL049782	7.44E-05	2.35E-05	7.66E-07	0.237794	
<u>290</u>	HG1471-HT3923	0.001377	2.35E-05	0.000519	0.203133	
<u>291</u>	HG4582-HT4987	7.44E-05	2.35E-05	4.63E-07	-0.39588	
<u>292</u>	U96629	0.001377	2.35E-05	1.00E-04	0.277256	
<u>293</u>	D64110	7.44E-05	2.58E-05	7.49E-05	-0.51036	BTG3
<u>294</u>	J04111	7.44E-05	2.58E-05	0.000108	-1.60276	JUN

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<u>295</u>	J04111	7.44E-05	2.58E-05	4.68E-05	-1.14014	JUN
<u>296</u>	X56681	7.44E-05	2.58E-05	0.00011 2	-0.48711	JUND
<u>297</u>	D21853	7.44E-05	2.58E-05	0.00040 3	-0.25594	KIAA0111
<u>298</u>	X80692	7.44E-05	2.58E-05	3.44E-05	-1.1939	MAPK6
<u>299</u>	S76638	7.44E-05	2.58E-05	5.23E-05	-0.46026	NFKB2
<u>300</u>	U65785	7.44E-05	2.58E-05	9.67E-06	-0.2389	ORP150
<u>301</u>	AB016247	7.44E-05	2.58E-05	3.13E-05	-0.57287	SC5DL
<u>302</u>	M55153	7.44E-05	2.58E-05	4.77E-06	-0.27465	TGM2
<u>303</u>	U02570	1.37E-05	2.81E-05	1.26E-06	0.432431	ARHGAP1
<u>304</u>	X04366	1.37E-05	2.81E-05	5.11E-06	0.346076	CAPN1
<u>305</u>	L10413	1.37E-05	2.81E-05	6.46E-06	0.207231	FNTA
<u>306</u>	AF055001	1.37E-05	2.81E-05	9.78E-06	-0.9457	HERPUD1
<u>307</u>	AI523538	1.37E-05	2.81E-05	0.00447 1	-0.1584	HIPK3
<u>308</u>	X59373	1.37E-05	2.81E-05	1.31E-05	-0.22992	HOXD10
<u>309</u>	X99209	1.37E-05	2.81E-05	2.65E-05	0.239777	HRMT1L1
<u>310</u>	M65217	1.37E-05	2.81E-05	1.02E-05	0.33377	HSF2
<u>311</u>	X17025	1.37E-05	2.81E-05	1.45E-05	-0.44351	IDI1
<u>312</u>	M35878	1.37E-05	2.81E-05	4.29E-05	-0.25267	IGFBP3
<u>313</u>	D63486	1.37E-05	2.81E-05	9.69E-06	0.235319	KIAA0152
<u>314</u>	AB002303	1.37E-05	2.81E-05	1.86E-05	-0.39642	KIAA0305
<u>315</u>	U20816	1.37E-05	2.81E-05	4.92E-05	-0.20145	NFKB2
<u>316</u>	M61906	1.37E-05	2.81E-05	5.93E-06	-0.39875	PIK3R1
<u>317</u>	U13695	1.37E-05	2.81E-05	1.31E-05	0.362255	PMS1
<u>318</u>	U38979	1.37E-05	2.81E-05	3.95E-05	0.158105	PMS2L9
<u>319</u>	X70218	1.37E-05	2.81E-05	2.44E-06	-0.74691	PPP4C
<u>320</u>	AC002400	1.37E-05	2.81E-05	2.28E-06	-0.25834	
<u>321</u>	AC005390	1.37E-05	2.81E-05	2.99E-05	-0.24231	
<u>322</u>	AF070606	1.37E-05	2.81E-05	1.48E-06	-0.89337	
<u>323</u>	HG2724-HT2820	1.37E-05	2.81E-05	5.17E-06	-1.33814	
<u>324</u>	X84194	7.44E-05	4.67E-05	6.38E-05	0.23578	ACYP1
<u>325</u>	AF039656	0.00482	4.67E-05	0.00025 1	-0.73273	BASP1
<u>326</u>	AB002384	0.00482	4.67E-05	4.22E-05	0.548091	C6orf32
<u>327</u>	X98172	7.44E-05	4.67E-05	5.29E-07	0.507556	CASP8
<u>328</u>	U60521	7.44E-05	4.67E-05	8.13E-06	-0.36762	CASP9
<u>329</u>	U11791	0.00482	4.67E-05	0.00036 3	-1.0232	CCNH
<u>330</u>	U67615	0.00482	4.67E-05	0.00094 8	1.23433	CHS1
<u>331</u>	AF037339	0.000344	4.67E-05	1.59E-05	-0.33549	CLPTM1
<u>332</u>	U65928	7.44E-05	4.67E-05	2.85E-07	0.408918	COP55
<u>333</u>	U37408	7.44E-05	4.67E-05	3.06E-05	0.157458	CTBP1
<u>334</u>	AB023143	0.00482	4.67E-05	0.00198 2	0.215415	DEFCAP

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<u>335</u>	AB014888	0.001377	4.67E-05	0.00020 4	-0.34841	DNAJB6
<u>336</u>	M60278	0.00482	4.67E-05	3.33E-05	-0.9007	DTR
<u>337</u>	U88629	0.000344	4.67E-05	9.58E-07	-0.32607	ELL2
<u>338</u>	M31899	0.000344	4.67E-05	0.00033 9	0.274507	ERCC3
<u>339</u>	M94856	7.44E-05	4.67E-05	4.99E-06	-0.23847	FABP5
<u>340</u>	X86779	0.001377	4.67E-05	1.08E-05	0.140032	FASTK
<u>341</u>	L00634	0.00482	4.67E-05	0.00019	0.205256	FNTA
<u>342</u>	AF078077	0.000344	4.67E-05	1.44E-05	-1.47649	GADD45B
<u>343</u>	D87119	7.44E-05	4.67E-05	4.62E-06	0.557116	GS3955
<u>344</u>	X17644	7.44E-05	4.67E-05	6.72E-06	-0.71963	GSPT1
<u>345</u>	L19314	0.00482	4.67E-05	0.00092 2	-0.35113	HRV
<u>346</u>	U05681	7.44E-05	4.67E-05	3.37E-06	-0.35383	HSBCL3S2
<u>347</u>	J00139	0.00482	4.67E-05	0.00019 6	-0.12797	HUMFOL5
<u>348</u>	M24283	0.000344	4.67E-05	3.71E-06	-1.32611	ICAM1
<u>349</u>	M62403	7.44E-05	4.67E-05	5.57E-07	-0.53749	IGFBP4
<u>350</u>	M28130	7.44E-05	4.67E-05	8.02E-07	-2.27292	IL8
<u>351</u>	Z56281	0.001377	4.67E-05	0.00024 3	0.309173	IRF3
<u>352</u>	L12002	7.44E-05	4.67E-05	1.23E-06	0.286717	ITGA4
<u>353</u>	K00558	0.001377	4.67E-05	0.00249 8	0.12909	K-ALPHA-1
<u>354</u>	AL044599	0.001377	4.67E-05	8.81E-05	0.321294	KIAA0222
<u>355</u>	AB002344	0.000344	4.67E-05	1.04E-05	-0.39307	KIAA0346
<u>356</u>	AB007889	7.44E-05	4.67E-05	2.33E-05	0.255643	KIAA0429
<u>357</u>	AB007916	0.00482	4.67E-05	0.00014 7	0.493018	KIAA0447
<u>358</u>	AB014538	0.000344	4.67E-05	1.98E-06	-0.63923	KIAA0638
<u>359</u>	AF055004	7.44E-05	4.67E-05	9.29E-05	0.200537	KIAA0763
<u>360</u>	AI148772	0.000344	4.67E-05	4.18E-06	-1.02619	KYNU
<u>361</u>	AF064491	0.00482	4.67E-05	0.00014 8	-0.54215	LDB1
<u>362</u>	L78132	7.44E-05	4.67E-05	5.15E-07	0.358576	LGALS8
<u>363</u>	X83441	7.44E-05	4.67E-05	6.75E-06	-0.17796	LIG4
<u>364</u>	AF055581	7.44E-05	4.67E-05	5.69E-06	-1.05728	LNK
<u>365</u>	AL049963	0.000344	4.67E-05	8.36E-07	-0.74421	LOC64116
<u>366</u>	AF014837	0.00482	4.67E-05	0.00063 6	0.325349	M6A
<u>367</u>	D14497	0.001377	4.67E-05	3.68E-05	-0.58619	MAP3K8
<u>368</u>	X75346	7.44E-05	4.67E-05	1.99E-05	-0.37877	MAPKAPK2
<u>369</u>	M62324	0.001377	4.67E-05	5.46E-05	-0.44552	MRF-1
<u>370</u>	AB023208	0.000344	4.67E-05	1.37E-05	0.293901	MSF
<u>371</u>	AF072928	0.001377	4.67E-05	1.13E-05	-0.3089	MTMR6
<u>372</u>	AF045451	0.000344	4.67E-05	6.34E-06	-0.40149	NAB1
<u>373</u>	M58603	7.44E-05	4.67E-05	1.28E-06	-0.73537	NFKB1

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<u>374</u>	U07132	0.00482	4.67E-05	0.00182 1	-0.14679	NR1H2
<u>375</u>	X75918	7.44E-05	4.67E-05	3.50E-05	-1.61126	NR4A2
<u>376</u>	S77154	0.00482	4.67E-05	0.00030 4	-1.33785	NR4A2
<u>377</u>	AB020657	0.00482	4.67E-05	2.75E-05	-0.50544	NS1-BP
<u>378</u>	D88674	7.44E-05	4.67E-05	6.26E-06	-0.99818	OAZIN
<u>379</u>	U27459	0.00482	4.67E-05	3.39E-05	0.430016	ORC2L
<u>380</u>	AF000545	7.44E-05	4.67E-05	3.48E-06	-0.85393	P2Y10
<u>381</u>	AF005043	7.44E-05	4.67E-05	2.70E-06	0.408592	PARG
<u>382</u>	AF026086	0.000344	4.67E-05	2.66E-06	0.297942	PEX1
<u>383</u>	AJ001625	7.44E-05	4.67E-05	9.91E-05	0.36837	PEX3
<u>384</u>	U30255	0.001377	4.67E-05	0.00082 6	0.325906	PGD
<u>385</u>	M61906	0.000344	4.67E-05	0.00061 1	-0.2492	PIK3R1
<u>386</u>	M60483	0.000344	4.67E-05	3.17E-05	-0.32565	PPP2CA
<u>387</u>	U14603	7.44E-05	4.67E-05	4.46E-05	0.427268	PTP4A2
<u>388</u>	AF069517	0.001377	4.67E-05	0.00044 1	0.330897	RBM6
<u>389</u>	M83221	0.000344	4.67E-05	1.58E-05	-0.26782	RELB
<u>390</u>	AF037195	0.00482	4.67E-05	8.27E-05	0.959619	RGS14
<u>391</u>	L07597	0.00482	4.67E-05	0.00016 9	0.277243	RPS6KA1
<u>392</u>	X15217	7.44E-05	4.67E-05	3.77E-07	-0.2371	SKIL
<u>393</u>	M20681	0.001377	4.67E-05	1.92E-05	-0.99917	SLC2A3
<u>394</u>	AF030409	7.44E-05	4.67E-05	7.66E-06	0.412043	SLC9A6
<u>395</u>	AJ224358	0.00482	4.67E-05	0.00961 3	0.14432	SURF5
<u>396</u>	U49928	0.000344	4.67E-05	6.31E-06	0.352648	TAB1
<u>397</u>	X89750	7.44E-05	4.67E-05	7.38E-06	-1.51687	TGIF
<u>398</u>	AA453183	0.001377	4.67E-05	4.48E-05	-0.61646	TIM17
<u>399</u>	M31165	7.44E-05	4.67E-05	1.38E-06	-0.34617	TNFAIP6
<u>400</u>	AF064090	0.001377	4.67E-05	4.05E-05	-0.38921	TNFSF14
<u>401</u>	AF082557	0.001377	4.67E-05	2.23E-06	0.226994	TNKS
<u>402</u>	D87448	0.00482	4.67E-05	0.00073 5	0.468196	TOPBP1
<u>403</u>	X05276	0.00482	4.67E-05	8.97E-05	-0.50457	TPM4
<u>404</u>	D50919	0.00482	4.67E-05	4.02E-05	0.332326	TRIM14
<u>405</u>	J03258	0.00482	4.67E-05	8.78E-05	-0.33021	VDR
<u>406</u>	AB007973	0.00482	4.67E-05	0.00014 6	0.271053	
<u>407</u>	AF041081	0.00482	4.67E-05	5.92E-05	0.26539	
<u>408</u>	AI889718	7.44E-05	4.67E-05	0.00014 3	-0.15002	
<u>409</u>	AL021154	0.000344	4.67E-05	2.19E-06	-0.82935	
<u>410</u>	AL049340	0.000344	4.67E-05	4.87E-05	-0.91769	
<u>411</u>	AL050078	0.000344	4.67E-05	1.63E-05	-0.2875	

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412	AL050378	0.000344	4.67E-05	5.72E-06	0.360577	
413	D50525	0.000344	4.67E-05	3.02E-06	0.486698	
414	J04755	7.44E-05	4.67E-05	6.75E-05	-0.37296	
415	M60784	7.44E-05	4.67E-05	1.24E-06	0.559903	
416	M63978	0.000344	4.67E-05	1.77E-06	-0.44762	
417	U90909	0.00482	4.67E-05	3.74E-05	-0.64272	
418	X63547	0.001377	4.67E-05	0.00030 3	0.505712	
419	AA135683	0.000344	5.23E-05	0.00028 9	-0.69258	BASP1
420	S78771	0.000344	5.23E-05	2.55E-06	-0.31389	BRD2
421	AL080156	0.000344	5.23E-05	3.52E-05	-0.94419	DKFZP434J214
422	D14838	0.000344	5.23E-05	7.34E-06	-0.50648	FGF9
423	W28281	0.000344	5.23E-05	8.96E-06	-1.09149	GABARAPL1
424	AB002344	7.44E-05	5.23E-05	8.48E-07	-1.00068	KIAA0346
425	U23070	0.000344	5.23E-05	3.62E-05	-0.12321	NMA
426	U04636	0.000344	5.23E-05	2.81E-06	-1.85123	PTGS2
427	U47634	0.000344	5.23E-05	0.00240 5	-0.21686	TUBB4
428	S73149	0.000344	5.23E-05	0.00371 4	-0.15741	
429	M63256	0.000344	5.92E-05	6.54E-07	0.454561	CDR2
430	U94905	0.000344	5.92E-05	2.08E-05	0.388608	DGKZ
431	AF012023	7.44E-05	5.92E-05	1.02E-06	0.50623	ICAP-1A
432	L10717	0.000344	5.92E-05	0.00015 8	0.345558	ITK
433	D29642	0.000344	5.92E-05	8.30E-06	0.327019	KIAA0053
434	AB011128	0.000344	5.92E-05	0.00058 4	0.151161	KIAA0556
435	AF075587	0.000344	5.92E-05	7.55E-06	0.4405	KIAA0916
436	U66464	0.000344	5.92E-05	2.93E-05	0.255675	MAP4K1
437	U18919	0.000344	5.92E-05	0.00057 3	0.277847	NBP
438	X58965	0.000344	5.92E-05	7.34E-05	0.231912	NME2
439	X13403	7.44E-05	5.92E-05	4.21E-07	0.146032	POU2F1
440	D89859	0.000344	5.92E-05	1.56E-05	0.375402	ZFP161
441	AF052100	0.000344	5.92E-05	1.37E-05	0.290021	
442	N53547	7.44E-05	7.24E-05	1.80E-07	0.296678	MGC5508
443	L35013	0.000344	7.24E-05	0.00011 2	-0.17331	SF3B4
444	Y17829	7.44E-05	7.24E-05	5.49E-06	-0.6508	SYN47
445	AL049987	7.44E-05	7.24E-05	2.39E-05	0.193082	
446	X66436	0.000344	7.24E-05	1.88E-06	-0.26662	
447	Z80345	7.44E-05	9.64E-05	7.31E-06	0.412137	ACADS
448	U27467	7.44E-05	9.64E-05	5.65E-06	-0.56637	BCL2A1
449	AI961669	7.44E-05	9.64E-05	0.00010 7	-0.1656	BIG2
450	X61123	7.44E-05	9.64E-05	4.17E-07	-1.15256	BTG1

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451	U49187	7.44E-05	9.64E-05	3.53E-06	0.511392	C6orf32
452	D13639	7.44E-05	9.64E-05	8.56E-06	-0.64255	CCND2
453	AL035398	7.44E-05	9.64E-05	0.00015 3	0.353395	CGI-51
454	U15932	7.44E-05	9.64E-05	0.00031	-1.26603	DUSP5
455	AD001530	7.44E-05	9.64E-05	3.06E-05	-0.37019	DXS9928E
456	Y07909	7.44E-05	9.64E-05	0.00016 1	-0.23489	EMP1
457	W27152	7.44E-05	9.64E-05	0.00050 2	0.186359	FLJ10569
458	L17131	7.44E-05	9.64E-05	1.48E-05	-0.24039	HMGIIY
459	X04430	7.44E-05	9.64E-05	4.15E-05	-0.21816	IL6
460	AB014608	7.44E-05	9.64E-05	4.59E-06	0.41494	KIAA0708
461	AF061258	7.44E-05	9.64E-05	1.58E-06	0.622201	LIM
462	U90919	7.44E-05	9.64E-05	7.23E-06	-0.50014	LOC57862
463	J05037	7.44E-05	9.64E-05	0.00018 5	-0.19243	SDS
464	X70944	7.44E-05	9.64E-05	2.08E-05	-0.72892	SFPQ
465	L41887	7.44E-05	9.64E-05	6.74E-06	-0.52203	SFRS7
466	X59871	7.44E-05	9.64E-05	1.91E-05	0.376648	TCF7
467	AI742846	7.44E-05	9.64E-05	0.00037 4	-0.48069	VAPA
468	HG2007-HT2056	7.44E-05	9.64E-05	4.01E-06	-0.41408	
469	X58141	7.44E-05	9.64E-05	1.75E-06	0.384254	
470	AB018323	7.44E-05	0.000106	2.41E-05	0.432301	GASC1
471	AB023192	7.44E-05	0.000106	0.00013 8	0.196185	I-1
472	AB020638	7.44E-05	0.000106	5.26E-05	0.233629	KIAA0831
473	U49395	7.44E-05	0.000106	0.00191 6	0.169175	P2RX5
474	M23379	7.44E-05	0.000106	3.22E-05	0.42571	RASA1
475	AF034176	7.44E-05	0.000106	0.00033 3	0.332105	
476	AJ012755	7.44E-05	0.000106	0.00029 6	0.26445	
477	AB007934	7.44E-05	0.000119	6.08E-06	0.345799	ACF7
478	M80899	7.44E-05	0.000119	2.48E-05	0.419409	AHNAK
479	AB014529	7.44E-05	0.000119	1.84E-05	0.43403	AKAP11
480	U37547	7.44E-05	0.000119	6.74E-06	-0.71736	BIRC2
481	U72649	7.44E-05	0.000119	0.00020 7	-0.30079	BTG2
482	D49738	7.44E-05	0.000119	0.00013 6	0.292742	CKAP1
483	AJ006267	7.44E-05	0.000119	7.19E-06	0.427023	CLPX
484	W28167	7.44E-05	0.000119	1.16E-05	0.214921	COPS7A
485	U18300	7.44E-05	0.000119	2.43E-06	0.183171	DDB2
486	AI133727	7.44E-05	0.000119	1.43E-06	0.181464	FLB6421
487	AA526812	7.44E-05	0.000119	0.00010 6	0.259476	FLJ10326

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<u>488</u>	D64142	7.44E-05	0.000119	1.66E-05	0.528036	HIFX
<u>489</u>	U60319	7.44E-05	0.000119	0.00106 4	0.194324	HFE
<u>490</u>	M17017	7.44E-05	0.000119	1.43E-06	-1.74073	IL8
<u>491</u>	D32053	7.44E-05	0.000119	0.00327 9	0.222661	KARS
<u>492</u>	AB007914	7.44E-05	0.000119	7.13E-05	0.302838	KIAA0445
<u>493</u>	U10485	7.44E-05	0.000119	7.40E-06	0.270352	LRMP
<u>494</u>	U29656	7.44E-05	0.000119	4.31E-06	0.471876	NME3
<u>495</u>	AB014604	7.44E-05	0.000119	1.72E-05	0.425787	OSBPL3
<u>496</u>	U41745	7.44E-05	0.000119	0.00204	0.230274	PDAP1
<u>497</u>	S90469	7.44E-05	0.000119	5.56E-06	-0.2636	POR
<u>498</u>	M26683	7.44E-05	0.000119	3.70E-06	-0.16179	SCYA2
<u>499</u>	X81789	7.44E-05	0.000119	2.23E-05	0.143079	SF3A3
<u>500</u>	L14595	7.44E-05	0.000119	3.55E-05	-0.1953	SLC1A4
<u>501</u>	AL079286	7.44E-05	0.000119	0.00024 5	0.165851	STAU2
<u>502</u>	AA845349	7.44E-05	0.000119	7.78E-07	0.457176	TRIP7
<u>503</u>	X59303	7.44E-05	0.000119	0.00012 4	0.224891	VAR52
<u>504</u>	AB023219	7.44E-05	0.000119	1.41E-05	0.316475	
<u>505</u>	M58603	7.44E-05	0.000129	9.08E-06	-0.56835	NFKB1
<u>506</u>	X77723	7.44E-05	0.000129	0.00678 8	-0.24317	RAB5EP
<u>507</u>	AF117829	7.44E-05	0.000129	2.61E-06	-0.57516	RIPK2
<u>508</u>	U52960	7.44E-05	0.000129	0.00104 2	-0.24648	SURB7
<u>509</u>	U84011	0.00482	0.000149	0.00013 4	0.286331	AGL
<u>510</u>	U90552	0.000344	0.000149	0.00018 2	0.288509	BTN3A1
<u>511</u>	M16336	0.00482	0.000149	0.00022 4	0.218007	CD2
<u>512</u>	U03106	0.000344	0.000149	0.00025 2	-0.87784	CDKN1A
<u>513</u>	AB009285	0.001377	0.000149	0.00013 7	0.235726	CFDP1
<u>514</u>	U63289	0.001377	0.000149	0.00172 2	-0.43517	CUGBP1
<u>515</u>	AF000430	0.00482	0.000149	0.00069 4	-0.19887	DNM1L
<u>516</u>	L11329	0.001377	0.000149	0.00014 2	-0.56584	DUSP2
<u>517</u>	AB007619	0.00482	0.000149	0.00207 3	0.198391	EBAG9
<u>518</u>	X81625	0.00482	0.000149	6.92E-05	-0.80689	ETF1
<u>519</u>	AL050128	0.000344	0.000149	1.81E-05	0.459416	FAM8A1
<u>520</u>	L49169	0.001377	0.000149	8.18E-05	-2.09549	FOSB
<u>521</u>	L25665	0.000344	0.000149	3.34E-06	-0.4513	GNL1
<u>522</u>	AI494623	0.00482	0.000149	0.00030	0.187206	HCDI

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<u>523</u>	D89678	0.001377	0.000149	3.03E-05	0.197298	HNRPD
<u>524</u>	U07563	0.000344	0.000149	1.02E-05	-0.23627	HSABLGR3
<u>525</u>	W28589	0.00482	0.000149	0.00012 9	0.170457	HSPD1
<u>526</u>	N29665	0.000344	0.000149	3.34E-05	0.593294	KIAA0618
<u>527</u>	AB023207	0.000344	0.000149	8.64E-06	-0.4056	KIAA0990
<u>528</u>	AL079277	0.00482	0.000149	0.00016 1	0.200656	LOC54103
<u>529</u>	Z14138	0.001377	0.000149	0.00019 7	-0.85008	MAP3K8
<u>530</u>	N23137	0.001377	0.000149	4.12E-06	0.244083	MPHOSPH9
<u>531</u>	AF050640	0.001377	0.000149	6.03E-05	0.324021	NDUFS2
<u>532</u>	AF069987	0.001377	0.000149	4.44E-05	0.203382	NIT1
<u>533</u>	AF043325	0.000344	0.000149	1.06E-05	0.328186	NMT2
<u>534</u>	M10901	0.001377	0.000149	1.91E-05	-0.58982	NR3C1
<u>535</u>	M12267	0.000344	0.000149	4.07E-06	-0.3279	OAT
<u>536</u>	U02882	0.00482	0.000149	0.00022 3	-0.99878	PDE4D
<u>537</u>	AF059531	0.000344	0.000149	6.73E-06	0.546441	PRMT3
<u>538</u>	M29893	0.001377	0.000149	9.96E-05	-0.15688	RALA
<u>539</u>	AB029028	0.001377	0.000149	9.11E-06	0.482258	RAP140
<u>540</u>	AB007448	0.00482	0.000149	0.00077 7	-0.319	SLC22A4
<u>541</u>	D87969	0.00482	0.000149	0.00157 8	0.401991	SLC35A1
<u>542</u>	U66615	0.00482	0.000149	0.00019 6	0.235993	SMARCC1
<u>543</u>	U46691	0.00482	0.000149	1.48E-05	-0.85179	SUPT6H
<u>544</u>	AF049910	0.00482	0.000149	0.00037 3	-0.32787	TACC1
<u>545</u>	X14787	0.001377	0.000149	2.88E-05	-0.19161	THBS1
<u>546</u>	AI375913	0.00482	0.000149	0.00090 5	-0.12102	TOP2A
<u>547</u>	X02344	0.001377	0.000149	0.00414	-0.20405	TUBB2
<u>548</u>	AF104421	0.000344	0.000149	6.50E-06	0.349373	UROD
<u>549</u>	J03258	0.000344	0.000149	1.21E-06	-0.58295	VDR
<u>550</u>	M58297	0.000344	0.000149	1.57E-05	0.185829	ZNF42
<u>551</u>	Y11681	0.000344	0.000149	1.92E-05	0.234481	
<u>552</u>	AF104942	0.001377	0.00019	4.83E-05	0.464438	ABCC5
<u>553</u>	L07261	0.000344	0.00019	0.00356 4	0.29763	ADD1
<u>554</u>	L19871	0.001377	0.00019	0.00010 5	-0.19867	ATF3
<u>555</u>	J04027	0.000344	0.00019	0.00013 3	-0.42466	ATP2B1
<u>556</u>	M83363	0.001377	0.00019	0.00447 1	0.177565	ATP2B4
<u>557</u>	AF038195	0.000344	0.00019	0.00013 4	0.281425	BCS1L

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<u>558</u>	S78771	0.001377	0.00019	0.00014 5	-0.24109	BRD2
<u>559</u>	L07044	0.001377	0.00019	0.00028 4	0.186013	CAMK2G
<u>560</u>	M28170	0.000344	0.00019	2.96E-05	0.356602	CD19
<u>561</u>	Y08682	0.000344	0.00019	0.00011 8	0.17398	CPT1B
<u>562</u>	AF046059	0.001377	0.00019	0.00066 5	0.204072	CREME9
<u>563</u>	L06797	0.001377	0.00019	0.00045 5	-0.93505	CXCR4
<u>564</u>	L39874	0.000344	0.00019	0.00035 4	0.353702	DCTD
<u>565</u>	AC004475	0.000344	0.00019	2.86E-05	0.25205	DKFZP434E2216
<u>566</u>	AI538172	0.001377	0.00019	0.00062 1	0.243057	DKFZp761B2423
<u>567</u>	AF010187	0.000344	0.00019	1.00E-05	0.361895	FIBP
<u>568</u>	AW051579	0.000344	0.00019	0.00025 8	0.390285	FLJ10512
<u>569</u>	M22632	0.001377	0.00019	1.34E-05	0.157239	GOT2
<u>570</u>	X59372	0.001377	0.00019	0.00052 8	-0.12959	HOXD9
<u>571</u>	X12433	0.000344	0.00019	1.07E-05	-0.39946	HS1-2
<u>572</u>	X15183	0.000344	0.00019	0.00064 5	-0.22973	HSPCA
<u>573</u>	AI912041	0.001377	0.00019	5.21E-05	-0.38517	HSPE1
<u>574</u>	X75315	0.000344	0.00019	0.01084 1	-0.64335	HSRNASEB
<u>575</u>	L42324	0.000344	0.00019	0.00026 2	-0.31758	HUMFRCG
<u>576</u>	X69433	0.001377	0.00019	0.00292 5	0.209735	IDH2
<u>577</u>	Y00093	0.000344	0.00019	2.60E-05	-0.39318	ITGAX
<u>578</u>	M88458	0.001377	0.00019	0.00203 1	-0.15998	KDEL2
<u>579</u>	AB011114	0.000344	0.00019	3.13E-05	0.278271	KIAA0542
<u>580</u>	AB011135	0.000344	0.00019	0.00014 9	0.247752	KIAA0563
<u>581</u>	U57721	0.001377	0.00019	3.47E-05	-0.23188	KYNU
<u>582</u>	Y11395	0.001377	0.00019	8.58E-05	0.34059	LANCL1
<u>583</u>	AI652660	0.000344	0.00019	2.28E-05	0.385107	LOC51112
<u>584</u>	AB026118	0.001377	0.00019	4.47E-06	-0.24886	MALT1
<u>585</u>	AB011144	0.000344	0.00019	9.36E-05	0.26851	MCM3AP
<u>586</u>	AI620381	0.000344	0.00019	8.06E-06	0.29605	MGC3077
<u>587</u>	AI525633	0.000344	0.00019	2.44E-05	0.170916	MGC5576
<u>588</u>	X16396	0.000344	0.00019	3.27E-06	-0.6151	MTHFD2
<u>589</u>	V00568	0.000344	0.00019	0.00076 9	0.549224	MYC
<u>590</u>	AL050281	0.000344	0.00019	2.85E-06	0.30517	NAG
<u>591</u>	AI985272	0.000344	0.00019	0.00047 4	-0.2571	NMB

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<u>592</u>	D38524	0.000344	0.00019	0.00131 3	0.228851	NT5B
<u>593</u>	AJ225089	0.000344	0.00019	0.00053 1	-0.2589	OASL
<u>594</u>	Z82200	0.000344	0.00019	0.00013 6	-0.28579	P2Y10
<u>595</u>	X63564	0.001377	0.00019	1.70E-05	-0.28202	POLR2A
<u>596</u>	S57501	0.001377	0.00019	0.00217 9	0.267744	PPP1CA
<u>597</u>	X07109	0.000344	0.00019	0.00069 4	0.167774	PRKCB1
<u>598</u>	M28209	0.000344	0.00019	0.00039 2	-0.52456	RAB1
<u>599</u>	M87339	0.000344	0.00019	3.41E-05	0.248151	RFC4
<u>600</u>	Z14000	0.000344	0.00019	3.91E-06	-0.33734	RING1
<u>601</u>	X06815	0.000344	0.00019	3.50E-05	0.293968	SNRP70
<u>602</u>	L23959	0.000344	0.00019	1.82E-05	-0.36834	TFDP1
<u>603</u>	AB018262	0.000344	0.00019	0.00024 1	0.319056	TOMM70A
<u>604</u>	X00437	0.001377	0.00019	0.00022	0.248344	TRB@
<u>605</u>	AF061016	0.000344	0.00019	0.00026 4	0.349913	UGDH
<u>606</u>	U62392	0.000344	0.00019	2.74E-05	-0.65983	ZNF193
<u>607</u>	X78925	0.001377	0.00019	0.00125 3	-0.28003	ZNF267
<u>608</u>	AI655015	0.001377	0.00019	0.00444	0.74681	
<u>609</u>	AL049387	0.001377	0.00019	5.12E-06	0.379296	
<u>610</u>	AL050376	0.000344	0.00019	0.00026	0.410405	
<u>611</u>	AB008775	0.000344	0.000304	1.88E-06	-0.80745	AQP9
<u>612</u>	AI141670	0.000344	0.000304	1.60E-06	-0.2494	CLCN2
<u>613</u>	AL080071	0.000344	0.000304	3.12E-06	0.237367	DKFZP564M082
<u>614</u>	AB028964	0.000344	0.000304	5.07E-05	0.351352	KIAA1041
<u>615</u>	M16801	0.001377	0.000304	0.00045 8	0.412733	NR3C2
<u>616</u>	N36842	0.001377	0.000304	0.00057 7	0.172944	UPF3A
<u>617</u>	AL096752	0.000344	0.000304	0.00032 3	-0.20419	
<u>618</u>	U76421	0.000344	0.000402	0.00027 8	0.226301	ADARB1
<u>619</u>	L13939	0.001377	0.000402	0.00021 5	0.180874	AP1B1
<u>620</u>	X97074	0.001377	0.000402	0.00192 4	0.298218	AP2S1
<u>621</u>	U72936	0.000344	0.000402	1.03E-05	0.356824	ATRX
<u>622</u>	X94910	0.000344	0.000402	0.00020 4	0.249294	C12orf8
<u>623</u>	U18291	0.000344	0.000402	2.45E-05	0.594377	CDC16
<u>624</u>	L22005	0.001377	0.000402	0.00011 1	-0.15257	CDC34
<u>625</u>	M59287	0.00482	0.000402	0.00027	-0.72279	CLK1

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<u>626</u>	U25435	0.000344	0.000402	0.00064 8	0.264876	CTCF
<u>627</u>	L39874	0.000344	0.000402	2.41E-05	0.211923	DCTD
<u>628</u>	X52104	0.000344	0.000402	0.00015 9	0.317963	DDX5
<u>629</u>	AL050062	0.000344	0.000402	0.00037 7	0.36401	DKFZP566K023
<u>630</u>	AL080081	0.00482	0.000402	0.00010 3	-0.60871	DNAJB9
<u>631</u>	X63741	0.001377	0.000402	0.00017 5	-0.59207	EGR3
<u>632</u>	D13988	0.001377	0.000402	0.00037 1	0.14676	GDI2
<u>633</u>	M27492	0.000344	0.000402	2.01E-06	-0.32619	IL1R1
<u>634</u>	S66213	0.000344	0.000402	9.56E-05	0.247863	ITGA6
<u>635</u>	AJ005896	0.000344	0.000402	5.38E-05	0.210462	JM4
<u>636</u>	Y10745	0.00482	0.000402	6.39E-05	-0.30524	KCNJ15
<u>637</u>	AB002374	0.00482	0.000402	0.00091 6	0.20284	KIAA0376
<u>638</u>	AB007874	0.001377	0.000402	0.00018 1	-0.21662	KIAA0414
<u>639</u>	AB011133	0.00482	0.000402	0.00052 1	0.302843	KIAA0561
<u>640</u>	AB018335	0.00482	0.000402	9.03E-05	0.234274	KIAA0792
<u>641</u>	M13452	0.00482	0.000402	0.00148	-0.28339	LMNA
<u>642</u>	X68836	0.00482	0.000402	2.15E-05	-0.57967	MAT2A
<u>643</u>	U79256	0.000344	0.000402	2.24E-05	0.328028	MGC14258
<u>644</u>	X76538	0.001377	0.000402	5.62E-05	0.408464	MPV17
<u>645</u>	AB011093	0.000344	0.000402	0.00010 1	0.612928	P114-RHO-GEF
<u>646</u>	X66363	0.001377	0.000402	6.80E-05	-0.24041	PCTK1
<u>647</u>	U13695	0.00482	0.000402	2.31E-05	0.31531	PMS1
<u>648</u>	D87078	0.000344	0.000402	3.88E-05	0.497225	PUM2
<u>649</u>	Z97074	0.001377	0.000402	3.97E-05	0.296662	RAB9P40
<u>650</u>	X90530	0.000344	0.000402	3.52E-05	0.254197	RAGB
<u>651</u>	U75679	0.001377	0.000402	0.00013 9	-0.29594	SLBP
<u>652</u>	AF007142	0.000344	0.000402	3.15E-06	0.678734	
<u>653</u>	AL021977	0.00482	0.000402	8.82E-05	-0.82538	
<u>654</u>	AL080192	0.001377	0.000402	4.26E-05	0.201319	
<u>655</u>	HG1980-HT2023	0.00482	0.000402	0.00377 5	-0.48359	
<u>656</u>	U47924	0.001377	0.000402	0.00013 4	0.52195	
<u>657</u>	U83661	0.000344	0.000444	9.97E-06	0.270218	ABCC5
<u>658</u>	A1961929	0.000344	0.000444	1.88E-05	0.461528	ARHGAP1
<u>659</u>	X78817	0.000344	0.000444	2.82E-05	0.281835	ARHGAP4
<u>660</u>	AL080164	0.000344	0.000444	0.00021 8	0.268161	DKFZP564C1940

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661	X90392	0.000344	0.000444	0.00020 8	0.150242	DNASE1L1
662	AI561196	0.000344	0.000444	0.00015 6	0.302434	FLJ11806
663	AJ008112	0.000344	0.000444	0.00024 6	-0.32126	FMNL
664	M94630	0.000344	0.000444	0.00024 4	0.274532	HNRPD
665	M38180	0.000344	0.000444	0.00303 7	-0.15741	HSD3B1
666	U79274	0.000344	0.000444	9.67E-05	0.285563	HSU79274
667	AB014585	0.000344	0.000444	6.48E-05	0.460196	KIAA0685
668	AB029001	0.000344	0.000444	0.00018 3	-0.33324	KIAA1078
669	AA045160	0.000344	0.000444	4.62E-05	0.179556	MRPS14
670	M96824	0.000344	0.000444	2.18E-05	0.139326	NUCB1
671	Y10055	0.000344	0.000444	9.91E-06	0.176067	PIK3CD
672	Z54367	0.000344	0.000444	1.30E-05	-0.39738	PLEC1
673	AF014402	0.000344	0.000444	7.63E-05	0.147061	PPAP2A
674	M30773	0.000344	0.000444	0.00116 1	0.41229	PPP3R1
675	M29386	0.000344	0.000444	6.26E-05	-0.23554	PRL
676	X02910	0.000344	0.000444	0.00137 8	-0.17579	TNF
677	S76792	0.000344	0.000444	0.00021 1	-0.16737	TNFRSF4
678	Y09008	0.000344	0.000444	0.00035 2	0.168444	UNG
679	U18009	0.000344	0.000444	0.00289 6	0.204706	VATI
680	D14533	0.000344	0.000444	0.00083 7	0.246085	XPA
681	W27419	0.000344	0.000444	2.83E-05	-0.44121	
682	Z85986	0.000344	0.000444	0.00040 7	-0.2149	
683	Z99716	0.000344	0.000444	5.14E-05	0.324642	
684	U50939	0.001377	0.000525	1.19E-05	0.235552	APPBP1
685	Y15521	0.00482	0.000525	0.00049 2	-0.28889	ASMTL
686	J05682	0.00482	0.000525	0.00029 1	-0.33004	ATP6C
687	D26362	0.00482	0.000525	0.00070 7	0.247252	BRD3
688	AL120687	0.001377	0.000525	1.21E-05	-0.55731	CSH1
689	U20350	0.00482	0.000525	0.01038 6	0.383475	CX3CR1
690	X04011	0.00482	0.000525	0.00015 4	0.348439	CYBB
691	U78524	0.001377	0.000525	6.56E-05	-0.36872	DDXBP1
692	U87947	0.001377	0.000525	5.05E-05	-0.29673	EMP3
693	AL035252	0.00482	0.000525	0.00373	0.074075	ENTPD6

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				5		
694	X04828	0.00482	0.000525	0.0015	0.256297	GNAI2
695	X56841	0.001377	0.000525	4.37E-05	0.338907	HLA-E
696	D49410	0.00482	0.000525	0.00016	-0.21753	HUMIL3RA12
697	L40586	0.00482	0.000525	3.02E-05	-0.20891	IDS
698	X52015	0.00482	0.000525	0.00032	-0.54051	IL1RN
699	D31888	0.00482	0.000525	7.50E-06	-0.44687	KIAA0071
700	D42047	0.001377	0.000525	3.50E-05	0.226884	KIAA0089
701	AB007958	0.00482	0.000525	0.00023	0.259725	KIAA0489
702	AB011100	0.00482	0.000525	0.00019 3	0.418151	KIAA0528
703	AB014553	0.00482	0.000525	0.00200 2	-0.25439	KIAA0653
704	A1888084	0.001377	0.000525	3.57E-05	0.391754	KIAA1624
705	X61118	0.00482	0.000525	0.00163 1	0.292879	LMO2
706	AJ004832	0.00482	0.000525	0.00171 5	0.30393	NTE
707	AB020631	0.001377	0.000525	0.00021 2	0.379354	PCF11
708	AB002359	0.00482	0.000525	2.36E-05	0.271468	PFAS
709	AB012229	0.001377	0.000525	0.00016 8	-0.59579	PFKFB3
710	M83088	0.001377	0.000525	3.50E-05	0.439367	PGM1
711	X84908	0.001377	0.000525	2.25E-05	0.331887	PHKB
712	U48250	0.001377	0.000525	8.51E-05	-0.2234	PRKCBP2
713	AB007851	0.000344	0.000525	1.95E-05	0.481768	PRPSAP2
714	X97267	0.00482	0.000525	0.00030 3	0.211707	PTPRCAP
715	M64595	0.00482	0.000525	0.00443 6	0.170959	RAC2
716	S59049	0.001377	0.000525	0.00091 5	-0.61362	RGS1
717	AL050267	0.00482	0.000525	0.00020 4	0.311003	SAMHD1
718	W28498	0.00482	0.000525	1.70E-05	-0.57386	SAR1
719	W27050	0.00482	0.000525	2.37E-05	-0.587	SFPQ
720	X92762	0.00482	0.000525	0.00011 6	0.283179	TAZ
721	U18422	0.001377	0.000525	0.00027 9	-0.14486	TFDP2
722	D87127	0.001377	0.000525	0.00012 6	-0.32216	TLOC1
723	U12595	0.001377	0.000525	1.07E-05	0.347309	TRAP1
724	AF046024	0.00482	0.000525	0.00046 9	0.405378	UBE1C
725	AF032456	0.001377	0.000525	5.89E-05	0.269833	UBE2G2
726	Y09723	0.00482	0.000525	0.00085 4	-0.23772	ZNF151
727	AL031778	0.00482	0.000525	0.00023	0.178561	

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				9		
<u>728</u>	AL049218	0.00482	0.000525	0.00195 1	0.238837	
<u>729</u>	AL080216	0.00482	0.000525	0.00034 9	0.311531	
<u>730</u>	L00352	0.00482	0.000525	0.00508 4	-0.39882	
<u>731</u>	S79267	0.00482	0.000525	0.00090 8	-0.19945	
<u>732</u>	U94902	0.00482	0.000525	0.00255 6	-0.17833	
<u>733</u>	AA206524	0.000344	0.000567	0.00017 2	0.161868	BART1
<u>734</u>	AA926959	0.000344	0.000567	8.47E-05	0.169915	CKS1
<u>735</u>	M27543	0.000344	0.000567	0.00031 9	-0.48924	GNAI3
<u>736</u>	AF019386	0.000344	0.000567	0.00039 9	-0.18103	HS3ST1
<u>737</u>	AB006537	0.000344	0.000567	0.00065 8	-0.1547	IL1RAP
<u>738</u>	AJ001306	0.000344	0.000567	5.70E-05	0.338818	INADL
<u>739</u>	AB011116	0.000344	0.000567	0.00035 5	0.25593	KIAA0544
<u>740</u>	AB029014	0.000344	0.000567	0.00135 2	-0.1261	KIAA1091
<u>741</u>	AB029027	0.000344	0.000567	0.00209	0.180974	KIAA1104
<u>742</u>	M10901	0.000344	0.000567	4.00E-05	-0.42455	NR3C1
<u>743</u>	D30036	0.000344	0.000567	5.62E-05	-0.15539	PITPN
<u>744</u>	U47077	0.000344	0.000567	0.00117 3	0.30799	PRKDC
<u>745</u>	AF006751	0.000344	0.000567	3.40E-05	-0.23462	RRBP1
<u>746</u>	AB006198	0.000344	0.000567	0.00146 5	0.256734	SART1
<u>747</u>	D63780	0.000344	0.000567	0.00021	0.374406	STK25
<u>748</u>	W28892	0.000344	0.000567	8.26E-05	0.803602	SUI1
<u>749</u>	M74524	0.000344	0.000567	0.00042 1	-0.31531	UBE2A
<u>750</u>	AL031230	0.000344	0.000567	6.83E-05	0.272378	
<u>751</u>	AF057160	0.001377	0.000588	0.00027 9	0.307281	ADPRTL1
<u>752</u>	M74491	0.001377	0.000588	3.02E-05	0.170825	ARF3
<u>753</u>	AL120559	0.001377	0.000588	4.80E-05	-0.64478	ARPP-19
<u>754</u>	D13630	0.001377	0.000588	3.01E-05	-0.42457	BZAP45
<u>755</u>	U83246	0.001377	0.000588	0.00350 2	0.133045	CPNE1
<u>756</u>	AL050390	0.001377	0.000588	0.00013 9	0.231898	DKFZP564O043
<u>757</u>	D13315	0.001377	0.000588	0.00020 3	0.371377	GLO1
<u>758</u>	H12458	0.001377	0.000588	5.42E-05	-0.22578	H12458 yj12d03.s1

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<u>759</u>	AI347088	0.001377	0.000588	0.00015 1	0.321012	HMG17L3
<u>760</u>	X59770	0.001377	0.000588	0.00141 7	-0.36292	IL1R2
<u>761</u>	AB007855	0.000344	0.000588	1.02E-05	0.086396	KIAA0395
<u>762</u>	AB016816	0.001377	0.000588	0.00075 1	0.146218	MASL1
<u>763</u>	U07132	0.001377	0.000588	0.00203 5	-0.27336	NR1H2
<u>764</u>	AB019409	0.001377	0.000588	0.00147 9	0.154377	PDL-108
<u>765</u>	AB020641	0.001377	0.000588	0.00342	0.174568	PFTK1
<u>766</u>	AL050259	0.001377	0.000588	0.00186 4	0.272972	RAB2L
<u>767</u>	AA099265	0.001377	0.000588	0.00061 4	0.38275	RECK
<u>768</u>	X75042	0.001377	0.000588	6.85E-05	-0.39572	REL
<u>769</u>	AL050290	0.001377	0.000588	0.00242 6	-0.28771	SAT
<u>770</u>	AJ006417	0.001377	0.000588	0.00012 5	-0.18595	TBCD
<u>771</u>	X02812	0.001377	0.000588	1.78E-05	-0.16423	TGFB1
<u>772</u>	AL050262	0.001377	0.000588	0.0031	0.348226	TLR1
<u>773</u>	X16576	0.001377	0.000588	9.49E-05	0.431692	ZNF46
<u>774</u>	X91249	0.000344	0.000609	1.04E-05	-0.3925	ABCG1
<u>775</u>	Y00486	0.000344	0.000609	0.00029 7	0.259418	APRT
<u>776</u>	U10473	0.000344	0.000609	0.00010 3	-0.15424	B4GALT1
<u>777</u>	AB014595	0.000344	0.000609	5.19E-05	0.320955	CUL4B
<u>778</u>	Y15227	0.000344	0.000609	4.08E-05	0.222481	DLEU1
<u>779</u>	U85267	0.000344	0.000609	0.00013 1	0.142894	DSCR1
<u>780</u>	AB019036	0.000344	0.000609	0.00033 6	0.177649	GGPS1
<u>781</u>	U90313	0.000344	0.000609	0.00183 8	-0.25377	GSTTLp28
<u>782</u>	L42243	0.000344	0.000609	0.00020 1	0.403838	HUMIFNAM08
<u>783</u>	X16983	0.000344	0.000609	0.00031 7	0.232935	ITGA4
<u>784</u>	AB002368	0.000344	0.000609	0.00170 9	0.215217	KIAA0370
<u>785</u>	AI521453	0.000344	0.000609	0.00070 7	-0.22735	PC4
<u>786</u>	Y08110	0.000344	0.000609	9.87E-05	0.260436	SORL1
<u>787</u>	D38122	0.000344	0.000609	6.27E-05	-0.61781	TNFSF6
<u>788</u>	U49278	0.000344	0.000609	0.00017 3	0.204424	UBE2V1
<u>789</u>	X99050	0.000344	0.000609	7.72E-05	0.289751	UVRAG
<u>790</u>	Z93930	0.000344	0.000609	0.00015	-0.26558	XBPI

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<u>791</u>	AF015767	0.000344	0.000659	0.00019 9	0.578977	BRE
<u>792</u>	M34677	0.000344	0.000659	0.00064 7	0.198622	F8A
<u>793</u>	J00210	0.000344	0.000659	0.00245 3	-0.18828	IFNA1
<u>794</u>	AJ007583	0.000344	0.000659	0.00506	-0.12644	LARGE
<u>795</u>	M36881	0.000344	0.000659	0.00030 2	0.328248	LCK
<u>796</u>	X70326	0.000344	0.000659	0.00013 2	-0.58974	MACMARCKS
<u>797</u>	M64571	0.000344	0.000659	0.00015 8	0.157573	MAP4
<u>798</u>	AI345944	0.000344	0.000659	0.00036 3	0.311507	NDUFB1
<u>799</u>	D23662	0.000344	0.000659	0.00017 1	0.289452	NEDD8
<u>800</u>	M14630	0.000344	0.000659	1.26E-05	-0.1626	PTMA
<u>801</u>	D64015	0.000344	0.000659	0.00101 2	0.195679	TIAL1
<u>802</u>	M63582	0.000344	0.000659	2.66E-05	-0.39175	
<u>803</u>	U79300	0.000344	0.000659	0.00019 6	-0.16218	
<u>804</u>	D29805	0.00482	0.000812	0.00028 9	-0.23044	B4GALT1
<u>805</u>	U47414	0.001377	0.000812	0.00013 7	0.262974	CCNG2
<u>806</u>	L33930	0.001377	0.000812	5.56E-06	0.343203	CD24
<u>807</u>	AL050164	0.00482	0.000812	0.00034 5	0.307729	CDYL
<u>808</u>	D10040	0.001377	0.000812	1.49E-05	-0.45708	FACL2
<u>809</u>	M36820	0.00482	0.000812	7.67E-05	-0.49075	GRO2
<u>810</u>	U77948	0.00482	0.000812	0.00051 1	0.286776	GTF2I
<u>811</u>	X56681	0.00482	0.000812	0.00050 3	-0.18359	JUND
<u>812</u>	AF070569	0.00482	0.000812	0.00044 6	-0.6104	MGC14376
<u>813</u>	W28205	0.00482	0.000812	0.00017	-0.21741	MKLN1
<u>814</u>	U61981	0.001377	0.000812	0.00072 5	0.203996	MSH3
<u>815</u>	AB014547	0.001377	0.000812	7.73E-05	0.217806	MTMR4
<u>816</u>	AL050366	0.00482	0.000812	0.00112 6	0.421541	OGT
<u>817</u>	U89606	0.001377	0.000812	6.13E-05	-0.19512	PDXK
<u>818</u>	D10495	0.00482	0.000812	0.00043 3	0.290156	PRKCD
<u>819</u>	D42063	0.001377	0.000812	0.00034 6	-0.52828	RANBP2
<u>820</u>	H68340	0.00482	0.000812	0.00408 1	-0.3419	RNAHP
<u>821</u>	AF059617	0.001377	0.000812	0.00012	-0.27807	SNK

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<u>822</u>	AB028950	0.00482	0.000812	0.00036 5	0.313606	TLN1
<u>823</u>	L41690	0.001377	0.000812	0.00010 9	0.401776	TRADD
<u>824</u>	X95384	0.00482	0.000812	0.00053	0.327055	UK114
<u>825</u>	X98054	0.00482	0.001094	4.71E-05	-0.12615	CREBL1
<u>826</u>	J05036	0.00482	0.001094	0.00171	0.064463	CTSE
<u>827</u>	AF001434	0.00482	0.001094	0.00016 1	-0.26223	EHD1
<u>828</u>	L18960	0.00482	0.001094	3.26E-05	-0.38369	EIF1A
<u>829</u>	AB014555	0.00482	0.001094	0.00160 8	-0.18202	KIAA0655
<u>830</u>	X76057	0.00482	0.001094	0.00035 2	0.193745	MPI
<u>831</u>	X74594	0.00482	0.001094	0.00035 2	0.439326	RBL2
<u>832</u>	AF044309	0.00482	0.001094	0.00021 7	-0.2163	STX11
<u>833</u>	U07158	0.00482	0.001094	0.00012 2	-0.2301	STX4A
<u>834</u>	L40386	0.00482	0.001094	7.97E-05	-0.19863	TFDP2
<u>835</u>	H97470	0.00482	0.001094	0.00062 4	-0.10587	
<u>836</u>	U78027	0.00482	0.001094	0.00080 4	0.340784	
<u>837</u>	U50534	0.001377	0.001345	0.00039	0.250627	13CDNA73
<u>838</u>	X55330	0.001377	0.001345	9.30E-05	0.493025	AGA
<u>839</u>	L19605	0.001377	0.001345	0.00444 2	0.183134	ANXA11
<u>840</u>	Y00097	0.001377	0.001345	4.42E-05	0.409932	ANXA6
<u>841</u>	U26455	0.00482	0.001345	0.00070 5	0.499049	ATM
<u>842</u>	AF047473	0.001377	0.001345	5.14E-05	0.226	BUB3
<u>843</u>	M95724	0.00482	0.001345	0.00216 6	-0.46553	CENPC1
<u>844</u>	AB014558	0.001377	0.001345	0.00466 2	-0.44793	CRY2
<u>845</u>	R38263	0.001377	0.001345	0.00048	-0.12843	DJ347H13.4
<u>846</u>	A1434146	0.001377	0.001345	0.00039 7	0.187485	DKFZp570I0164
<u>847</u>	D12686	0.00482	0.001345	0.00874 4	-0.11456	EIF4G1
<u>848</u>	AF059611	0.00482	0.001345	0.00069 4	-0.27343	ENC1
<u>849</u>	X59834	0.001377	0.001345	0.00498 6	-0.34836	GLUL
<u>850</u>	D64142	0.001377	0.001345	0.00016 9	0.293999	H1FX
<u>851</u>	U51333	0.001377	0.001345	0.00037 6	0.273402	HK3
<u>852</u>	M59488	0.001377	0.001345	0.00135 7	-0.13313	HUMS100B3

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853	X58529	0.001377	0.001345	0.00041 7	1.04789	IGHM
854	D79983	0.001377	0.001345	2.97E-05	0.387491	KIAA0161
855	AB002370	0.00482	0.001345	0.00052	0.425557	KIAA0372
856	AB007863	0.001377	0.001345	0.00012 8	0.29668	KIAA0403
857	AB014549	0.001377	0.001345	0.00150 5	0.42387	KIAA0649
858	AB020711	0.00482	0.001345	0.00207 9	0.222346	KIAA0904
859	AB002357	0.001377	0.001345	0.00104 5	0.317849	KIF3B
860	U09284	0.00482	0.001345	0.00079 2	-0.23635	LIMS1
861	D50810	0.001377	0.001345	5.17E-05	-0.1859	LNPEP
862	U18259	0.001377	0.001345	0.00015 3	0.229322	MHC2TA
863	AF041080	0.00482	0.001345	0.00196 4	0.367098	MN7
864	X70991	0.001377	0.001345	0.00203	-0.14032	NAB2
865	AC002045	0.00482	0.001345	0.00028	0.326033	NPIP
866	U92538	0.001377	0.001345	0.00149	0.2372	ORC5L
867	U24153	0.001377	0.001345	0.00018	-0.36291	PAK2
868	Z49194	0.001377	0.001345	0.00051 9	0.215733	POU2AF1
869	AF016371	0.001377	0.001345	0.00105 9	0.240562	PPIH
870	AF020736	0.001377	0.001345	6.26E-05	-0.32893	PSMC4
871	D11327	0.001377	0.001345	0.00019	-0.74969	PTPN7
872	AF098799	0.00482	0.001345	0.00189 3	-0.3646	RANBP7
873	M22995	0.001377	0.001345	0.00558 6	0.270032	RAP1A
874	L11566	0.001377	0.001345	0.00029 1	0.17032	RPL18
875	U71364	0.001377	0.001345	0.00027 6	-0.24064	SERPINB9
876	X07834	0.00482	0.001345	0.00036 2	-0.21917	SOD2
877	X05839	0.001377	0.001345	0.00077 9	-0.20819	TGFB1
878	AB000509	0.001377	0.001345	3.63E-05	0.460686	TRAF5
879	U82130	0.001377	0.001345	4.69E-05	-0.36064	TSG101
880	L16842	0.001377	0.001345	0.00153 3	0.189597	UQCRC1
881	X51521	0.001377	0.001345	0.00037 9	-0.62845	VIL2
882	M86400	0.001377	0.001345	0.00013 2	-0.30595	YWHAZ
883	AF041259	0.001377	0.001345	0.00139 3	0.202001	ZNF217

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884	AA977136	0.001377	0.001345	0.00195 3	0.095364	
885	AI624038	0.001377	0.001345	0.00183 3	-0.16137	
886	AL050148	0.00482	0.001345	0.00090 5	0.266795	
887	HG2709-HT2805	0.001377	0.001345	0.00013 4	-0.22645	
888	HG3227-HT3404	0.001377	0.001345	4.02E-05	-0.23244	
889	M28225	0.00482	0.001345	0.00144 4	-0.95152	
890	U80017	0.001377	0.001345	0.00491 7	0.171432	
891	X55544	0.001377	0.001467	0.00104 9	-0.12406	ATF1
892	X52560	0.001377	0.001467	8.17E-05	-0.50375	CEBPB
893	AA044787	0.001377	0.001467	0.00114 7	0.289086	CNOT8
894	AF017790	0.001377	0.001467	6.88E-06	0.382661	HEC
895	D00749	0.001377	0.001467	0.00013 1	-0.10539	HUMCD7G3
896	AB007890	0.001377	0.001467	0.00083 8	0.200677	KIAA0430
897	L35251	0.001377	0.001467	0.00087 3	0.12909	MFAP3
898	AF098638	0.001377	0.001467	0.00068 4	-0.18761	RAB5EP
899	AB004857	0.001377	0.001467	0.00047 1	0.23048	SLC11A2
900	U53347	0.001377	0.001467	0.00136 7	-0.13658	SLC1A5
901	U04847	0.001377	0.001467	0.00040 3	0.117176	SMARCB1
902	M92843	0.001377	0.001467	3.30E-05	-1.37866	ZFP36
903	AF033199	0.001377	0.001467	0.00019	0.237743	ZNF204
904	AC004893	0.001377	0.001467	0.00061 7	-0.25759	
905	AL050151	0.001377	0.001467	8.03E-06	-0.80887	
906	U80770	0.001377	0.001467	0.00673 8	-0.12644	
907	W27675	0.00482	0.001614	0.00515 7	0.468709	CDA02
908	AI056696	0.00482	0.001614	0.00066 5	0.215941	CETN3
909	AF062536	0.00482	0.001614	0.00500 1	0.197482	CUL1
910	D29643	0.00482	0.001614	0.0005	0.157183	DDOST
911	AA181196	0.00482	0.001614	0.00016 6	0.119162	FLJ11712
912	W07033	0.001377	0.001614	0.00013 6	0.347648	GMFG
913	Z18859	0.00482	0.001614	0.00068	0.181514	GNAT2

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				4		
914	U83660	0.00482	0.001614	0.00114	0.136411	HSU83660
915	AA628946	0.00482	0.001614	0.00268 4	0.337197	KHSRP
916	D13626	0.00482	0.001614	0.00583 7	0.254138	KIAA0001
917	AB002340	0.00482	0.001614	0.00297 7	0.168464	KIAA0342
918	AB002353	0.001377	0.001614	0.00011 9	0.305921	KIAA0355
919	U32849	0.00482	0.001614	0.00027 2	0.345048	NMI
920	S79219	0.00482	0.001614	0.00011 9	0.167463	PCCA
921	L37127	0.00482	0.001614	0.01017 3	0.103446	POLR2J
922	M35416	0.00482	0.001614	0.00143 3	0.33505	RALB
923	X76061	0.00482	0.001614	0.00027 3	0.378113	RBL2
924	AF061741	0.00482	0.001614	0.00458 6	0.221278	SDR1
925	D31891	0.001377	0.001614	0.00081 9	0.161458	SETDB1
926	W26406	0.00482	0.001614	0.00047 9	0.300512	SIAH1
927	X84002	0.00482	0.001614	0.00069 9	0.143479	TAF2J
928	U81006	0.00482	0.001614	0.00315 1	0.255479	TM9SF2
929	U69108	0.00482	0.001614	0.00065 7	0.208286	TRAF5
930	S66666	0.00482	0.001614	0.00241 7	0.119478	
931	U84388	0.00482	0.001719	0.00019 7	-0.18606	CRADD
932	L08069	0.00482	0.001719	0.00198 5	-0.31866	DNAJA1
933	U41514	0.00482	0.001719	9.38E-05	-0.44803	GALNT1
934	M69013	0.001377	0.001719	6.26E-05	-0.1948	GNA11
935	L11706	0.00482	0.001719	0.00142 2	-0.16675	LIPE
936	R92331	0.00482	0.001719	0.00019 8	-0.24196	MT1E
937	X64318	0.00482	0.001719	0.00625 3	-0.37391	NFIL3
938	X12458	0.00482	0.001719	0.00148 9	-0.33668	P3
939	M25393	0.00482	0.001719	0.00095 8	-0.23304	PTPN2
940	M59465	0.00482	0.001719	0.0002	-0.96074	TNFAIP3
941	AF084260	0.00482	0.001719	0.00106 3	-0.39491	TRIP15

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<u>942</u>	HG2149-HT2219	0.00482	0.001719	0.00143 7	-0.14432	
<u>943</u>	AB021663	0.00482	0.001963	0.00027	-0.13923	ATF5
<u>944</u>	AL080209	0.00482	0.001963	0.00033 7	0.437957	DKFZP586F2423
<u>945</u>	M34641	0.00482	0.001963	0.00235 2	-0.14552	FGFR1
<u>946</u>	AL096714	0.001377	0.001963	0.00046 9	0.224782	FLJ20113
<u>947</u>	AB011124	0.001377	0.001963	0.00010 1	-0.17709	KIAA0552
<u>948</u>	AB020633	0.001377	0.001963	0.00082	0.308616	KIAA0826
<u>949</u>	AB029020	0.001377	0.001963	0.00061	0.3824	KIAA1097
<u>950</u>	X76220	0.001377	0.001963	7.21E-05	0.444366	MAL
<u>951</u>	AF040964	0.00482	0.001963	0.00116 1	-0.54746	MGC4701
<u>952</u>	U91512	0.001377	0.001963	0.00035	-0.55826	NINJ1
<u>953</u>	U60325	0.00482	0.001963	0.00028 8	-0.14386	POLG
<u>954</u>	Z15108	0.001377	0.001963	0.00010 7	0.176424	PRKCZ
<u>955</u>	Y08262	0.001377	0.001963	0.00018 3	0.377974	SCA2
<u>956</u>	U30246	0.001377	0.001963	0.00020 9	-0.25952	SLC12A2
<u>957</u>	J04137	0.001377	0.001963	0.00064 1	-0.22175	SSA2
<u>958</u>	M38449	0.001377	0.001963	0.0004	-0.29059	TGFB1
<u>959</u>	AC005757	0.00482	0.001963	0.00016 9	0.387439	
<u>960</u>	HG825-HT825	0.001377	0.001963	0.00055 3	-0.19964	
<u>961</u>	AF047348	0.001377	0.002207	0.00029 2	0.202669	APBA2
<u>962</u>	AF053977	0.001377	0.002207	0.00314 3	0.134266	CDC23
<u>963</u>	AF083322	0.001377	0.002207	0.00034 4	0.272282	CEP1
<u>964</u>	AL050369	0.001377	0.002207	0.00122 4	0.241992	DKFZP566J153
<u>965</u>	D32257	0.001377	0.002207	0.00023 8	0.300058	GTF3A
<u>966</u>	M65217	0.001377	0.002207	0.00023 2	0.249614	HSF2
<u>967</u>	AB014574	0.001377	0.002207	0.00060 6	0.130056	KIAA0674
<u>968</u>	AB029023	0.001377	0.002207	0.00021 9	0.219428	KIAA1100
<u>969</u>	Z34975	0.001377	0.002207	8.88E-05	0.41432	LDLC
<u>970</u>	D83597	0.001377	0.002207	0.00013 6	0.249838	LY64
<u>971</u>	U09759	0.001377	0.002207	0.00084	0.330751	MAPK9

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				2		
<u>972</u>	U59302	0.001377	0.002207	0.00024 1	0.309348	NCOA1
<u>973</u>	AJ005698	0.001377	0.002207	0.00417 3	0.139618	PARN
<u>974</u>	X54871	0.001377	0.002207	0.01003 5	0.119258	RAB5B
<u>975</u>	AL080198	0.001377	0.002207	0.00286 6	0.251598	RENT2
<u>976</u>	M74447	0.001377	0.002207	0.00044 4	0.093537	TAP2
<u>977</u>	J04973	0.001377	0.002207	0.01169 6	0.141705	UQCRC2
<u>978</u>	U90902	0.001377	0.002207	0.00133 6	0.246217	
<u>979</u>	U94333	0.001377	0.002323	0.00481 8	-0.13898	C1QR
<u>980</u>	U60808	0.001377	0.002323	0.00037 4	-0.12217	CDS1
<u>981</u>	L08069	0.001377	0.002323	0.00216 1	-0.29982	DNAJA1
<u>982</u>	AA552140	0.001377	0.002323	0.00336 8	-0.22604	E2F4
<u>983</u>	M31210	0.001377	0.002323	0.00012 4	-0.33555	EDG1
<u>984</u>	AI189287	0.001377	0.002323	0.00244 5	-0.24115	H1F2
<u>985</u>	W25934	0.001377	0.002323	0.00338 5	-0.32382	JTV1
<u>986</u>	Z98046	0.001377	0.002323	0.00012 2	-0.33551	MAGED2
<u>987</u>	L76571	0.001377	0.002323	0.00998 5	-0.12617	NR0B2
<u>988</u>	AF071504	0.001377	0.002323	0.00019 1	-0.14267	STX11
<u>989</u>	X56687	0.001377	0.002323	0.00011	-0.29728	UBTF
<u>990</u>	AI097085	0.001377	0.002323	0.00094 1	-0.16209	
<u>991</u>	AA114830	0.001377	0.002503	0.00029 3	0.272601	AKAP10
<u>992</u>	AI991631	0.001377	0.002503	0.00013 2	-0.11786	BRD4
<u>993</u>	U04343	0.001377	0.002503	4.45E-05	-0.25478	CD86
<u>994</u>	M12824	0.001377	0.002503	0.00827 1	-0.34597	CD8A
<u>995</u>	U89896	0.001377	0.002503	0.00699 7	-0.2182	CSNK1G2
<u>996</u>	AI432401	0.001377	0.002503	0.00607 2	0.32631	FGL2
<u>997</u>	AA176780	0.001377	0.002503	0.00129 6	0.14235	HSA249128
<u>998</u>	M21188	0.001377	0.002503	0.00016 5	0.251899	IDE

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<u>999</u>	U43572	0.001377	0.002503	0.00012 8	0.318327	NAGLU
<u>100</u> <u>0</u>	X02751	0.001377	0.002503	0.00035 9	-0.2229	NRAS
<u>100</u> <u>1</u>	AF069250	0.001377	0.002503	0.00135	0.476217	OA48-18
<u>100</u> <u>2</u>	D25328	0.001377	0.002503	0.00017 1	0.125335	PFKP
<u>100</u> <u>3</u>	AF010312	0.001377	0.002503	0.00121 6	-0.47628	PIG7
<u>100</u> <u>4</u>	M34668	0.001377	0.002503	0.00042 1	0.181315	PTPRA
<u>100</u> <u>5</u>	AF061836	0.001377	0.002503	0.00102 6	0.21847	RASSF1
<u>100</u> <u>6</u>	AI535653	0.001377	0.002503	0.00171 2	0.34571	SC4MOL
<u>100</u> <u>7</u>	X75755	0.001377	0.002503	0.00381 3	-0.2236	SFRS2
<u>100</u> <u>8</u>	W16505	0.001377	0.002503	0.00169 9	0.101763	SNRPD2
<u>100</u> <u>9</u>	L31529	0.001377	0.002503	0.00032 5	0.144265	SNTB1
<u>101</u> <u>0</u>	D86970	0.001377	0.002503	0.00021 9	0.218777	TIAF1
<u>101</u> <u>1</u>	AL050223	0.001377	0.002503	0.00263 2	0.2458	VAMP2
<u>101</u> <u>2</u>	AA877215	0.001377	0.002503	0.00843 9	-0.17878	
<u>101</u> <u>3</u>	AL049435	0.001377	0.002503	0.00011 1	0.194323	
<u>101</u> <u>4</u>	M76180	0.001377	0.002575	0.00069 8	0.162775	DDC
<u>101</u> <u>5</u>	M94065	0.001377	0.002575	0.00042 6	0.156894	DHODH
<u>101</u> <u>6</u>	J04988	0.001377	0.002575	6.17E-05	-0.22304	HSPCB
<u>101</u> <u>7</u>	Z68907	0.001377	0.002575	0.00030 5	0.391111	IDH3G
<u>101</u> <u>8</u>	J03909	0.001377	0.002575	0.00083 7	-0.35709	IFI30
<u>101</u> <u>9</u>	AB011104	0.001377	0.002575	0.00072 9	0.227798	KIAA0532
<u>102</u> <u>0</u>	AB011173	0.001377	0.002575	0.00058 5	0.283714	KIAA0601
<u>102</u> <u>1</u>	U70322	0.001377	0.002575	0.00017 7	-0.41259	KPNB2
<u>102</u> <u>2</u>	D86961	0.001377	0.002575	0.00192 5	-0.19403	LHFPL2
<u>102</u> <u>3</u>	AF052111	0.001377	0.002575	0.00073 8	0.249468	LOC51172
<u>102</u> <u>4</u>	AJ224875	0.001377	0.002575	0.00509 1	0.139606	MGC2840
<u>102</u> <u>5</u>	M21985	0.001377	0.002575	0.00140 9	-0.102	NR2C1

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<u>102</u> <u>6</u>	J05448	0.001377	0.002575	0.00498 2	-0.15329	POLR2C
<u>102</u> <u>7</u>	AB006572	0.001377	0.002575	0.00016 9	0.213636	RMP
<u>102</u> <u>8</u>	AJ011712	0.001377	0.002575	0.01137 2	0.066711	TNNT1
<u>102</u> <u>9</u>	AJ006973	0.001377	0.002575	0.00010 1	-0.31773	TOM1
<u>103</u> <u>0</u>	U67122	0.001377	0.002575	0.00036 4	-0.14274	UBL1
<u>103</u> <u>1</u>	U71598	0.001377	0.002575	0.00350 8	0.128607	ZNF274
<u>103</u> <u>2</u>	M81118	0.001377	0.002575	0.00023	0.333526	
<u>103</u> <u>3</u>	U61166	0.001377	0.002575	0.00305 5	-0.14488	
<u>103</u> <u>4</u>	U94902	0.001377	0.002575	0.00013 7	-0.23298	
<u>103</u> <u>5</u>	Z82244	0.001377	0.002575	0.00025 8	-0.53938	
<u>103</u> <u>6</u>	M36341	0.001377	0.002788	0.00056	-0.38498	ARF4
<u>103</u> <u>7</u>	L09159	0.001377	0.002788	0.00112	0.474985	ARHA
<u>103</u> <u>8</u>	U68485	0.00482	0.002788	0.00679 7	0.224774	BIN1
<u>103</u> <u>9</u>	Z22555	0.001377	0.002788	0.00545 5	-0.16351	CD36L1
<u>104</u> <u>0</u>	D44497	0.00482	0.002788	0.00445 3	0.131654	CORO1A
<u>104</u> <u>1</u>	L37042	0.00482	0.002788	0.00058 2	-0.33273	CSNK1A1
<u>104</u> <u>2</u>	M74099	0.001377	0.002788	0.00014	0.389638	CUTL1
<u>104</u> <u>3</u>	AL080159	0.001377	0.002788	0.00233 5	-0.11101	DKFZP434M154
<u>104</u> <u>4</u>	AF004292	0.001377	0.002788	0.00130 6	-0.2375	DKFZP566C134
<u>104</u> <u>5</u>	AF088982	0.001377	0.002788	0.00126 4	-0.22098	DNAJB5
<u>104</u> <u>6</u>	U73704	0.001377	0.002788	0.00141 2	-0.17508	FAP48
<u>104</u> <u>7</u>	M77810	0.00482	0.002788	0.00020 9	-0.15854	GATA2
<u>104</u> <u>8</u>	U67369	0.00482	0.002788	0.00347	0.137095	GFI1
<u>104</u> <u>9</u>	D00632	0.001377	0.002788	0.00113 8	-0.15517	GPX3
<u>105</u> <u>0</u>	X99270	0.001377	0.002788	0.00065	0.191612	HSXQ28ORF
<u>105</u> <u>1</u>	D42041	0.00482	0.002788	0.00370 5	0.195279	KIAA0088
<u>105</u> <u>2</u>	AA524058	0.001377	0.002788	0.00028 8	0.360599	LOC51020

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<u>105</u> 3	U77604	0.001377	0.002788	0.00233	0.296247	MGST2
<u>105</u> 4	J04031	0.00482	0.002788	0.00014 8	0.290038	MTHFD1
<u>105</u> 5	AF025794	0.001377	0.002788	0.00676 3	0.107466	MTRR
<u>105</u> 6	D86326	0.001377	0.002788	0.00821 7	0.124987	P115
<u>105</u> 7	U14417	0.001377	0.002788	0.00052 1	-0.13999	RALGDS
<u>105</u> 8	U85611	0.001377	0.002788	0.00012 6	-0.3879	SIP2-28
<u>105</u> 9	U66617	0.001377	0.002788	0.00146 2	-0.14653	SMARCD1
<u>106</u> 0	X59960	0.001377	0.002788	0.00512 7	-0.11069	SMPD1
<u>106</u> 1	AF031166	0.001377	0.002788	0.00121 9	0.110457	SRP46
<u>106</u> 2	U86136	0.001377	0.002788	0.00054 2	0.149235	TEP1
<u>106</u> 3	U16296	0.001377	0.002788	0.00138	0.136848	TIAM1
<u>106</u> 4	D50917	0.001377	0.002788	0.00046 7	0.402091	TRIP-Br2
<u>106</u> 5	AC004770	0.001377	0.002788	0.00104 2	-0.10615	
<u>106</u> 6	J03071	0.001377	0.002788	0.0116	0.17732	
<u>106</u> 7	D67031	0.00482	0.004163	0.00020 4	0.543743	ADD3
<u>106</u> 8	U68030	0.00482	0.004163	0.00027 9	-0.16075	CCR6
<u>106</u> 9	U41387	0.00482	0.004163	8.67E-05	-0.29576	DDX21
<u>107</u> 0	AF084535	0.00482	0.004163	0.00230 6	0.159095	EPM2A
<u>107</u> 1	A1417075	0.00482	0.004163	0.00053 8	0.330385	FLJ14040
<u>107</u> 2	D82348	0.00482	0.004349	0.00606 3	0.245422	ATIC
<u>107</u> 3	AA648295	0.00482	0.004349	0.00242 2	0.337484	CBX3
<u>107</u> 4	U79270	0.00482	0.004349	0.00134 5	0.460807	COX11
<u>107</u> 5	AF071748	0.00482	0.004349	0.00247 1	0.170315	CTSF
<u>107</u> 6	AL080088	0.00482	0.004349	0.00020 7	0.165357	DKFZP564K206 2
<u>107</u> 7	A1540318	0.00482	0.004349	0.00055	-0.13789	DNAJB6
<u>107</u> 8	U03272	0.00482	0.004349	0.00389 3	0.101031	FBN2
<u>107</u> 9	Z97989	0.00482	0.004349	0.00112 6	-0.41969	FYN

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<u>108</u> 0	AF042379	0.00482	0.004349	0.00830 8	0.176604	GCP2
<u>108</u> 1	U73737	0.00482	0.004349	0.00262	-0.14396	HUMMSH06
<u>108</u> 2	AF031167	0.00482	0.004349	0.00011 7	0.201914	IL15
<u>108</u> 3	D83778	0.00482	0.004349	0.00050 4	-0.2149	KIAA0194
<u>108</u> 4	AB028965	0.00482	0.004349	0.00727 7	0.125446	KIAA1042
<u>108</u> 5	M79321	0.00482	0.004349	0.00324 7	-0.21992	LYN
<u>108</u> 6	L11284	0.00482	0.004349	0.00399 4	-0.09508	MAP2K1
<u>108</u> 7	AJ000882	0.00482	0.004349	0.00042	0.180413	NCOA1
<u>108</u> 8	L41067	0.00482	0.004349	0.00038 8	0.370635	NFATC3
<u>108</u> 9	AF057297	0.00482	0.004349	0.00119 1	0.521103	OAZ2
<u>109</u> 0	X66360	0.00482	0.004349	0.00112 3	-0.17473	PCTK2
<u>109</u> 1	U24183	0.00482	0.004349	0.00115 6	0.141168	PFKM
<u>109</u> 2	L42373	0.00482	0.004349	0.00670 6	0.165885	PPP2R5A
<u>109</u> 3	AB018288	0.00482	0.004349	0.00377 7	0.184227	RANBP16
<u>109</u> 4	M58459	0.00482	0.004349	0.00892 3	-1.04752	RPS4Y
<u>109</u> 5	M60725	0.00482	0.004349	0.00134 9	-0.10092	RPS6KB1
<u>109</u> 6	Y10931	0.00482	0.004349	0.00124 6	0.194156	SPK
<u>109</u> 7	AB004904	0.00482	0.004349	0.00023 3	-0.31373	SSI-3
<u>109</u> 8	AF060798	0.00482	0.004349	0.00080 9	0.142845	STK16
<u>109</u> 9	U66867	0.00482	0.004349	0.01131 8	0.150812	UBE2I
<u>110</u> 0	AB028980	0.00482	0.004349	0.00147 1	0.265042	USP24
<u>110</u> 1	AF052107	0.00482	0.004349	0.00288 4	0.197902	
<u>110</u> 2	AL031985	0.00482	0.004349	0.00018 1	-0.24089	
<u>110</u> 3	D26121	0.00482	0.004349	0.00387	-0.16268	
<u>110</u> 4	W28667	0.00482	0.004349	0.00439 1	0.476395	
<u>110</u> 5	AL050157	0.00482	0.004467	0.00028 9	0.269949	DKFZP586O012 0
<u>110</u> 6	U31930	0.00482	0.004467	0.00024 4	0.349997	DUT

ANNOTATED MARKED-UP SPECIFICATION

<u>110</u> <u>7</u>	A1951946	0.00482	0.004467	8.71E-05	0.401112	HBOA
<u>110</u> <u>8</u>	AB002354	0.00482	0.004467	0.00151 7	-0.13368	KIAA0356
<u>110</u> <u>9</u>	M36067	0.00482	0.004467	8.15E-05	0.277858	LIG1
<u>111</u> <u>0</u>	J02783	0.00482	0.004467	0.00215 1	-0.21979	P4HB
<u>111</u> <u>1</u>	M37238	0.00482	0.004467	0.00533 3	-0.15474	PLCG2
<u>111</u> <u>2</u>	M99438	0.00482	0.004467	6.20E-05	-0.36844	TLE3
<u>111</u> <u>3</u>	Z97630	0.00482	0.004467	0.00279 4	0.217849	
<u>111</u> <u>4</u>	D14874	0.00482	0.005608	0.00061 1	-0.55358	ADM
<u>111</u> <u>5</u>	L08177	0.00482	0.005608	0.00043 4	-0.49252	EBI2
<u>111</u> <u>6</u>	U09510	0.00482	0.005608	5.27E-05	-0.57567	GARS
<u>111</u> <u>7</u>	L05424	0.00482	0.005608	0.00011 4	-0.39048	HUMSCG19
<u>111</u> <u>8</u>	X13956	0.00482	0.005608	0.00409 8	0.187622	MGC10471
<u>111</u> <u>9</u>	U88620	0.00482	0.005608	0.00074	0.345628	OGG1
<u>112</u> <u>0</u>	M29551	0.00482	0.005608	0.00047 1	0.319301	PPP3CB
<u>112</u> <u>1</u>	AF068836	0.00482	0.005608	0.00032 3	-0.23628	PSCDBP
<u>112</u> <u>2</u>	U08316	0.00482	0.005608	0.0006	0.205899	RPS6KA3
<u>112</u> <u>3</u>	J02966	0.00482	0.005608	0.00049 8	-0.11291	SLC25A4
<u>112</u> <u>4</u>	AF107463	0.00482	0.005608	0.00282 4	-0.36924	SPF30
<u>112</u> <u>5</u>	AB000450	0.00482	0.005608	0.00025 6	-0.24717	VRK2
<u>112</u> <u>6</u>	AF070590	0.00482	0.005608	0.00083 4	0.127523	
<u>112</u> <u>7</u>	AF001383	0.00482	0.006065	0.00207 5	0.16512	BIN1
<u>112</u> <u>8</u>	AF026291	0.00482	0.006065	0.00038 5	-0.16859	CCT4
<u>112</u> <u>9</u>	D63877	0.00482	0.006065	0.00522 6	-0.13956	KIAA0157
<u>113</u> <u>0</u>	U14383	0.00482	0.006065	0.00262 3	-0.18669	MUC8
<u>113</u> <u>1</u>	U68140	0.00482	0.006065	0.00067 7	0.172443	NVL
<u>113</u> <u>2</u>	L25441	0.00482	0.006065	0.00061 3	-0.17207	PGGT1B
<u>113</u> <u>3</u>	U46751	0.00482	0.006065	0.00057 8	-0.38675	SQSTM1

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<u>113</u> 4	HG4740-HT5187	0.00482	0.006065	0.00867	0.146562	
<u>113</u> 5	W26851	0.00482	0.006065	0.00205 2	0.312992	
<u>113</u> 6	U78735	0.00482	0.006347	0.00052 9	-0.09197	ABCA3
<u>113</u> 7	Y12226	0.00482	0.006347	0.00039 7	-0.21303	APIG1
<u>113</u> 8	D38293	0.00482	0.006347	0.00289 4	-0.24373	AP3M2
<u>113</u> 9	X14046	0.00482	0.006347	0.00108 4	0.134786	CD37
<u>114</u> 0	AF026004	0.00482	0.006347	0.00862 2	-0.07494	CLCN2
<u>114</u> 1	U46023	0.00482	0.006347	0.00027 3	-0.17969	CXorf6
<u>114</u> 2	AL080178	0.00482	0.006347	0.00068 3	0.260343	DKFZP434K171
<u>114</u> 3	AL080118	0.00482	0.006347	0.00190 4	-0.28696	DKFZP564F1123
<u>114</u> 4	AL050197	0.00482	0.006347	0.00429 4	0.233045	DKFZP586D062 3
<u>114</u> 5	X68277	0.00482	0.006347	0.01141 1	-0.42385	DUSP1
<u>114</u> 6	X03674	0.00482	0.006347	0.00847 8	0.174463	G6PD
<u>114</u> 7	Y13286	0.00482	0.006347	0.00406 8	0.134985	GDI2
<u>114</u> 8	U19247	0.00482	0.006347	0.00058 9	-0.29688	HSINFGRA7
<u>114</u> 9	AB023163	0.00482	0.006347	0.00253 7	0.194491	HYPH
<u>115</u> 0	L36818	0.00482	0.006347	0.00718 2	0.204818	INPPL1
<u>115</u> 1	U51127	0.00482	0.006347	0.00395 2	0.108702	IRF5
<u>115</u> 2	M15395	0.00482	0.006347	0.00186 3	0.402323	ITGB2
<u>115</u> 3	U51336	0.00482	0.006347	0.00861 5	0.336527	ITPK1
<u>115</u> 4	AJ000008	0.00482	0.006347	0.00025 6	-0.14181	PIK3C2G
<u>115</u> 5	A1126004	0.00482	0.006347	0.00095 4	0.262925	SAS10
<u>115</u> 6	AF051325	0.00482	0.006347	0.00014 4	-0.43952	SH2D2A
<u>115</u> 7	U79528	0.00482	0.006347	0.00251 8	0.158101	SR-BP1
<u>115</u> 8	U52426	0.00482	0.006347	9.31E-05	0.411984	STIM1
<u>115</u> 9	AB018339	0.00482	0.006347	0.00075 1	0.199758	SYNE-1B
<u>116</u> 0	D43642	0.00482	0.006347	0.0005	0.305805	TCFL1

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<u>116</u> <u>1</u>	D29767	0.00482	0.006347	0.00393 4	-0.09702	TEC
<u>116</u> <u>2</u>	M92383	0.00482	0.006347	0.00146 6	0.219769	TMSB10
<u>116</u> <u>3</u>	AA192359	0.00482	0.006347	0.00028	0.17619	TRN-SR
<u>116</u> <u>4</u>	AC004472	0.00482	0.006347	0.00216 9	-0.15115	
<u>116</u> <u>5</u>	AF052138	0.00482	0.006347	0.00018 9	0.441167	
<u>116</u> <u>6</u>	X15674	0.00482	0.006347	0.00789 9	-0.10738	
<u>116</u> <u>7</u>	Z82215	0.00482	0.006347	0.00252 7	0.153792	
<u>116</u> <u>8</u>	AF070523	0.00482	0.006634	0.00037	0.437983	JWA
<u>116</u> <u>9</u>	D13641	0.00482	0.006634	0.00077 6	0.275308	KIAA0016
<u>117</u> <u>0</u>	X79204	0.00482	0.006634	0.00018 2	0.256049	SCA1
<u>117</u> <u>1</u>	AB015718	0.00482	0.006634	0.00117 2	0.202412	STK10
<u>117</u> <u>2</u>	AF059575	0.00482	0.006634	0.00056 3	-0.18074	
<u>117</u> <u>3</u>	M74089	0.00482	0.006634	0.00076	0.187888	
<u>117</u> <u>4</u>	U44111	0.00482	0.006634	0.00384 5	0.105361	
<u>117</u> <u>5</u>	AJ243310	0.00482	0.006921	0.00094 5	-0.97643	C14orf3
<u>117</u> <u>6</u>	W26854	0.00482	0.006921	0.01109 8	-0.13774	DKFZP434D156
<u>117</u> <u>7</u>	U88629	0.00482	0.006921	0.00177 8	-0.16763	ELL2
<u>117</u> <u>8</u>	M59830	0.00482	0.006921	0.00022 1	-1.12882	HSPA1B
<u>117</u> <u>9</u>	M95929	0.00482	0.006921	0.00460 6	-0.34536	PMX1
<u>118</u> <u>0</u>	M57399	0.00482	0.006921	0.01023 1	-0.14331	PTN
<u>118</u> <u>1</u>	N25117	0.00482	0.006921	0.00206 8	-0.16335	RPS26
<u>118</u> <u>2</u>	AL049940	0.00482	0.006921	0.00114 9	-0.42489	RYBP
<u>118</u> <u>3</u>	U39318	0.00482	0.006921	0.00109 7	-0.24533	UBE2D3
<u>118</u> <u>4</u>	Z29331	0.00482	0.006921	0.00019 3	-0.15851	UBE2H
<u>118</u> <u>5</u>	M55682	0.00482	0.006921	0.01026 4	-0.10921	
<u>118</u> <u>6</u>	S58544	0.00482	0.006921	0.00550 1	-0.11193	
<u>118</u> <u>7</u>	L13687	0.00482	0.007311	0.00218 5	0.114008	ARL2

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<u>118</u> 8	M88714	0.00482	0.007311	0.00207 5	0.114833	BDKRB2
<u>118</u> 9	AL050173	0.00482	0.007311	0.00186 6	0.128954	C21orf25
<u>119</u> 0	M33680	0.00482	0.007311	0.00261 2	0.134487	CD81
<u>119</u> 1	X05299	0.00482	0.007311	0.00383 7	0.171613	CENPB
<u>119</u> 2	X16832	0.00482	0.007311	0.00057 8	0.177395	CTSH
<u>119</u> 3	U83410	0.00482	0.007311	0.00520 7	0.219569	CUL2
<u>119</u> 4	AL050018	0.00482	0.007311	0.00393 8	0.220539	DKFZP564B116
<u>119</u> 5	AL080063	0.00482	0.007311	0.00656 2	0.186332	DKFZP564I052
<u>119</u> 6	AL050286	0.00482	0.007311	0.00076 7	0.221397	DKFZP586A011
<u>119</u> 7	X63692	0.00482	0.007311	0.00317 4	0.172997	DNMT1
<u>119</u> 8	AA522537	0.00482	0.007311	0.00276 2	0.113812	ELAC2
<u>119</u> 9	A1183417	0.00482	0.007311	0.00616 7	0.101739	GABPB1
<u>120</u> 0	X62534	0.00482	0.007311	0.00097 3	0.195089	HMG2
<u>120</u> 1	D50532	0.00482	0.007311	0.00126 8	0.159735	HML2
<u>120</u> 2	AJ006591	0.00482	0.007311	0.00137 9	0.1682	HSA6591
<u>120</u> 3	Y00796	0.00482	0.007311	0.00043 8	0.386166	ITGAL
<u>120</u> 4	AB018301	0.00482	0.007311	0.00870 1	0.138344	KIAA0758
<u>120</u> 5	AB020694	0.00482	0.007311	0.00252 6	0.205561	KIAA0887
<u>120</u> 6	AB023198	0.00482	0.007311	0.00040 9	0.275051	KIAA0981
<u>120</u> 7	AB028958	0.00482	0.007311	0.00153 3	0.117614	KIAA1035
<u>120</u> 8	U66711	0.00482	0.007311	0.00656 7	0.260368	LY6E
<u>120</u> 9	L13744	0.00482	0.007311	0.00765 8	0.19599	MLLT3
<u>121</u> 0	Y09631	0.00482	0.007311	0.00076 9	0.309898	PIBF1
<u>121</u> 1	L77213	0.00482	0.007311	0.00112 2	0.247214	PMVK
<u>121</u> 2	X73478	0.00482	0.007311	0.00068 1	0.242238	PPP2R4
<u>121</u> 3	U94319	0.00482	0.007311	0.00068 8	0.337656	PSIP2
<u>121</u> 4	U27516	0.00482	0.007311	0.00022 2	0.194938	RAD52

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<u>121</u> 5	W25793	0.00482	0.007311	0.00043 8	0.258505	RNF3
<u>121</u> 6	X06617	0.00482	0.007311	0.00258 1	0.116631	RPS11
<u>121</u> 7	Z25749	0.00482	0.007311	0.00141 9	0.123333	RPS7
<u>121</u> 8	U80760	0.00482	0.007311	0.00737 1	0.161214	TNRC1
<u>121</u> 9	L27071	0.00482	0.007311	0.00063 8	0.372837	TXK
<u>122</u> 0	AL031427	0.00482	0.007311	0.00054 1	0.367004	
<u>122</u> 1	AL109722	0.00482	0.007311	0.00187	0.134304	
<u>122</u> 2	X15675	0.00482	0.007311	0.01116 5	0.131908	
<u>122</u> 3	AL050089	0.00482	0.007852	0.00190 6	-0.23061	BAZ1A
<u>122</u> 4	L22005	0.00482	0.007852	0.00243 9	-0.22532	CDC34
<u>122</u> 5	AB014679	0.00482	0.007852	0.00305 9	-0.13664	CHST2
<u>122</u> 6	X77956	0.00482	0.007852	0.00068 9	-0.22743	ID1
<u>122</u> 7	AI814466	0.00482	0.007852	0.00112 7	-0.1955	VAMP5
<u>122</u> 8	HG4074-HT4344	0.00482	0.007852	0.00096 4	-0.17461	
<u>122</u> 9	AF005050	0.00482	0.008059	0.00176 1	0.230395	DNPEP
<u>123</u> 0	J03909	0.00482	0.008059	0.00012 5	-0.18353	IFI30
<u>123</u> 1	X59841	0.00482	0.008059	0.00022 6	0.265756	PBX3
<u>123</u> 2	AI819942	0.00482	0.009314	0.00228 6	0.326115	02-Sep
<u>123</u> 3	D86981	0.00482	0.009314	0.00344 1	0.319525	APPBP2
<u>123</u> 4	Y10805	0.00482	0.009314	0.00258 3	0.183496	HRMT1L2
<u>123</u> 5	U51127	0.00482	0.009314	0.00212	0.282678	IRF5
<u>123</u> 6	U14970	0.00482	0.009314	0.00056 1	0.144991	RPS5
<u>123</u> 7	AI813532	0.00482	0.009314	0.00037	-0.41933	TNFRSF1B
<u>123</u> 8	Y15228	0.00482	0.010363	0.00202 6	-0.17032	DLEU2
<u>123</u> 9	AA926957	0.00482	0.010363	0.00090 9	-0.22483	FLJ10534
<u>124</u> 0	AA554945	0.00482	0.010363	0.00182 7	-0.14301	FLJ10803
<u>124</u> 1	AJ001383	0.00482	0.010363	0.00196 8	-0.3226	LY94

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<u>124</u> <u>2</u>	M97676	0.00482	0.010363	0.01001 1	-0.16313	MSX1
<u>124</u> <u>3</u>	AF002020	0.00482	0.010363	0.00127 8	-0.1736	NPC1
<u>124</u> <u>4</u>	U25975	0.00482	0.010363	0.00076 4	-0.24651	PAK2
<u>124</u> <u>5</u>	X66363	0.00482	0.010363	0.00083 7	-0.4179	PCTK1
<u>124</u> <u>6</u>	D87957	0.00482	0.010363	0.00441 8	-0.14751	RQCD1
<u>124</u> <u>7</u>	AI610467	0.00482	0.010363	0.00069 9	-0.17683	SMG1
<u>124</u> <u>8</u>	AJ012008	0.00482	0.010363	0.00257 1	-0.32997	
<u>124</u> <u>9</u>	AJ012008	0.00482	0.010363	0.00163 8	-0.16204	

Table II: Gene Expression Profile from PBMCs of MS vs. Healthy- Highest Scoring Genes (Bonferroni analysis)

<u>SEQ ID NO:</u>	Identifier	TNOM PValue	Info PValue	t-Test PValue	Log FoldChange	Symbol
<u>125</u> <u>0</u>	AA203527	1.37E-05	1.61E-06	1.18E-07	0.281992	RPP20
<u>125</u> <u>1</u>	AA780049	7.44E-05	2.35E-05	7.39E-07	0.54912	FLJ214 39
<u>125</u> <u>2</u>	AA845349	7.44E-05	0.0001187	7.78E-07	0.457176	TRIP7
<u>125</u> <u>3</u>	AA902713	2.11E-06	1.99E-06	1.44E-06	0.474378	
<u>125</u> <u>4</u>	AB002344	7.44E-05	5.92E-05	8.48E-07	-1.00068	KIAA0 346
<u>125</u> <u>5</u>	AB002347	2.11E-06	1.33E-07	7.19E-10	0.371731	KIAA0 349
<u>125</u> <u>6</u>	AB002348	1.37E-05	3.86E-06	2.49E-07	0.576346	KIAA0 350
<u>125</u> <u>7</u>	AB002386	2.11E-06	7.73E-07	5.34E-09	0.586117	EZH1
<u>125</u> <u>8</u>	AB002448	1.37E-05	5.01E-06	2.45E-07	0.468926	
<u>125</u> <u>9</u>	AB007891	1.37E-05	3.86E-06	3.99E-05	0.196376	KIAA0 431
<u>126</u> <u>0</u>	AB007895	1.37E-05	5.01E-06	9.61E-07	0.186643	KIAA0 435
<u>126</u> <u>1</u>	AB007927	2.11E-06	1.99E-06	2.12E-07	0.323787	RERE
<u>126</u> <u>2</u>	AB007960	2.11E-06	9.54E-07	7.96E-06	0.447772	SH3GL B1
<u>126</u> <u>3</u>	AB008775	0.0003443	0.0003041	1.88E-06	-0.80745	AQP9
<u>126</u> <u>4</u>	AB011004	0.0003443	7.05E-06	1.41E-06	-1.34073	UAP1

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<u>126</u> <u>5</u>	AB011108	1.37E-05	5.05E-07	4.39E-07	0.453498	PRP4
<u>126</u> <u>6</u>	AB011113	1.37E-05	7.05E-06	3.74E-07	0.444795	WDR7
<u>126</u> <u>7</u>	AB011115	1.37E-05	5.05E-07	3.39E-07	0.382809	KIAA0543
<u>126</u> <u>8</u>	AB011161	2.57E-08	4.01E-09	9.64E-11	0.63432	PIP5K1C
<u>126</u> <u>9</u>	AB014535	1.37E-05	5.05E-07	1.04E-06	0.285282	KIAA0635
<u>127</u> <u>0</u>	AB014538	0.0003443	4.67E-05	1.98E-06	-0.63923	KIAA0638
<u>127</u> <u>1</u>	AB014579	1.37E-05	5.01E-06	6.08E-08	0.367966	MGEA5
<u>127</u> <u>2</u>	AB014608	7.44E-05	9.64E-05	4.59E-06	0.41494	KIAA0708
<u>127</u> <u>3</u>	AB015019	7.44E-05	7.05E-06	2.75E-07	-0.24515	BAIAP2
<u>127</u> <u>4</u>	AB018343	1.84E-09	4.16E-10	9.05E-12	0.383078	KIAA0800
<u>127</u> <u>5</u>	AB023153	2.11E-06	1.33E-07	1.82E-08	0.895842	KIAA0936
<u>127</u> <u>6</u>	AB023235	7.44E-05	1.61E-06	1.43E-05	0.311216	KIAA1018
<u>127</u> <u>7</u>	AB026118	0.0013772	0.0001897	4.47E-06	-0.24886	MALT1
<u>127</u> <u>8</u>	AB026436	7.44E-05	1.61E-06	0.000219	-0.7589	DUSP10
<u>127</u> <u>9</u>	AB028951	2.64E-07	1.72E-07	8.78E-09	0.543028	KIAA1028
<u>128</u> <u>0</u>	AB028981	2.11E-06	7.73E-07	5.34E-07	0.282288	KIAA1058
<u>128</u> <u>1</u>	AB029015	2.64E-07	2.49E-07	5.37E-09	0.695063	PLCE2
<u>128</u> <u>2</u>	AB029038	7.44E-05	1.61E-06	7.62E-05	0.364386	KIAA1115
<u>128</u> <u>3</u>	AC002400	1.37E-05	3.06E-05	2.28E-06	-0.25834	UBPH
<u>128</u> <u>4</u>	AF000545	7.44E-05	5.23E-05	3.48E-06	-0.85393	P2Y10
<u>128</u> <u>5</u>	AF001294	1.37E-05	7.05E-06	1.23E-06	-0.76359	TSSC3
<u>128</u> <u>6</u>	AF004230	2.64E-07	1.72E-07	3.06E-07	0.349166	LILRB1
<u>128</u> <u>7</u>	AF005043	7.44E-05	5.23E-05	2.70E-06	0.408592	PARG
<u>128</u> <u>8</u>	AF007130	2.11E-06	5.05E-07	2.51E-06	0.391811	LOC54104
<u>128</u> <u>9</u>	AF007142	0.0003443	0.0004443	3.15E-06	0.678734	
<u>129</u> <u>0</u>	AF007151	1.37E-05	5.05E-07	3.25E-06	0.468343	MMS19L
<u>129</u> <u>1</u>	AF010193	7.44E-05	2.35E-05	1.26E-07	-1.4705	MADH7

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<u>129</u> <u>2</u>	AF010309	1.37E-05	5.01E-06	7.36E-07	-0.28533	PIG3
<u>129</u> <u>3</u>	AF012023	7.44E-05	5.92E-05	1.02E-06	0.50623	ICAP-1A
<u>129</u> <u>4</u>	AF014958	2.11E-06	4.31E-06	1.05E-07	-0.42152	CCRL2
<u>129</u> <u>5</u>	AF015553	2.11E-06	9.54E-07	2.61E-07	0.61214	GTF2I
<u>129</u> <u>6</u>	AF019083	1.37E-05	5.01E-06	8.34E-07	0.17011	PTENP1
<u>129</u> <u>7</u>	AF022375	2.64E-07	8.23E-08	1.87E-11	-1.35847	VEGF
<u>129</u> <u>8</u>	AF023614	1.37E-05	1.51E-05	4.79E-07	-0.20744	TACI
<u>129</u> <u>9</u>	AF024710	8.55E-11	8.55E-11	1.13E-12	-1.95537	VEGF
<u>130</u> <u>0</u>	AF026086	0.0003443	4.67E-05	2.66E-06	0.297942	PEX1
<u>130</u> <u>1</u>	AF029777	1.37E-05	7.05E-06	8.27E-07	0.290159	GCN5L2
<u>130</u> <u>2</u>	AF030249	1.37E-05	1.61E-06	1.98E-07	0.534547	ECH1
<u>130</u> <u>3</u>	AF035281	2.11E-06	2.48E-06	4.87E-07	0.472445	
<u>130</u> <u>4</u>	AF038564	1.37E-05	1.61E-06	2.05E-07	-0.40446	ITCH
<u>130</u> <u>5</u>	AF040707	2.11E-06	1.99E-06	3.57E-07	0.289845	NPR2L
<u>130</u> <u>6</u>	AF042386	1.37E-05	5.01E-06	0.000107	0.137192	PP1E
<u>130</u> <u>7</u>	AF052160	7.44E-05	1.51E-05	1.67E-06	0.623021	
<u>130</u> <u>8</u>	AF054176	2.11E-06	1.33E-07	6.47E-09	-0.58138	C1orf7
<u>130</u> <u>9</u>	AF054589	0.0003443	2.35E-05	1.98E-06	0.945394	
<u>131</u> <u>0</u>	AF061258	7.44E-05	9.64E-05	1.58E-06	0.622201	LIM
<u>131</u> <u>1</u>	AF067853	1.37E-05	5.01E-06	5.02E-06	0.361707	ADSL
<u>131</u> <u>2</u>	AF069517	2.11E-06	1.33E-07	4.91E-07	0.399638	RBM6
<u>131</u> <u>3</u>	AF070582	2.64E-07	1.72E-07	3.23E-08	-0.19773	MGC13033
<u>131</u> <u>4</u>	AF070606	1.37E-05	3.06E-05	1.48E-06	-0.89337	
<u>131</u> <u>5</u>	AF070617	1.37E-05	3.86E-06	3.23E-07	0.323494	
<u>131</u> <u>6</u>	AF077820	2.64E-07	2.19E-08	2.91E-08	0.656852	LRP5
<u>131</u> <u>7</u>	AF079167	2.64E-07	2.49E-07	7.37E-10	-1.93249	OLR1
<u>131</u> <u>8</u>	AF082557	0.0013772	4.67E-05	2.23E-06	0.226994	TNKS

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<u>131</u> 9	AF094481	1.37E-05	5.01E-06	2.74E-07	-0.29045	CGGBP 1
<u>132</u> 0	AF098641	2.64E-07	1.72E-07	1.56E-07	-0.41172	
<u>132</u> 1	AF110377	1.37E-05	5.01E-06	3.05E-05	0.361232	TRRAP
<u>132</u> 2	AF117829	7.44E-05	0.000129	2.61E-06	-0.57516	RIPK2
<u>132</u> 3	AI133727	7.44E-05	0.0001187	1.43E-06	0.181464	FLB642 1
<u>132</u> 4	AI141670	0.0003443	0.0003041	1.60E-06	-0.2494	CLCN2
<u>132</u> 5	AI148772	0.0003443	4.67E-05	4.18E-06	-1.02619	KYNU
<u>132</u> 6	AI184802	2.64E-07	2.19E-08	2.67E-09	-0.21576	HPRP4 P
<u>132</u> 7	AI560890	2.57E-08	2.83E-08	1.80E-07	0.179028	
<u>132</u> 8	AI670100	7.44E-05	2.58E-05	7.70E-07	0.22677	GRLF1
<u>132</u> 9	AI754391	1.37E-05	3.86E-06	1.72E-06	-0.27657	KLF12
<u>133</u> 0	AI935146	0.0003443	2.35E-05	2.05E-06	-0.46726	GALN T3
<u>133</u> 1	AI950382	1.37E-05	1.61E-06	1.63E-07	-0.74128	KIAA0 585
<u>133</u> 2	AI970189	0.0003443	2.35E-05	6.16E-07	-0.75934	KIAA0 997
<u>133</u> 3	AJ002190	7.44E-05	1.61E-06	2.17E-08	0.33775	GNPAT
<u>133</u> 4	AJ007042	2.64E-07	1.72E-07	2.10E-07	0.170935	WHSC 1
<u>133</u> 5	AJ010059	2.11E-06	5.05E-07	2.95E-06	0.2235	SIT
<u>133</u> 6	AL008583	2.64E-07	2.19E-08	1.12E-08	0.250082	CBX6
<u>133</u> 7	AL021154	0.0003443	4.67E-05	2.19E-06	-0.82935	ID3
<u>133</u> 8	AL021707	0.0003443	7.05E-06	4.95E-06	-2.21462	
<u>133</u> 9	AL022398	7.44E-05	1.61E-06	8.09E-08	0.919627	
<u>134</u> 0	AL022398	7.44E-05	7.05E-06	1.10E-07	0.79713	DJ434 O14.3
<u>134</u> 1	AL022398	7.44E-05	2.58E-05	2.40E-06	0.493166	
<u>134</u> 2	AL023553	1.37E-05	1.75E-05	2.51E-06	0.226635	PMM1
<u>134</u> 3	AL049387	0.0013772	0.0001897	5.12E-06	0.379296	
<u>134</u> 4	AL049409	7.44E-05	1.51E-05	1.10E-06	0.714173	LEF1
<u>134</u> 5	AL049782	7.44E-05	2.58E-05	7.66E-07	0.237794	

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<u>134</u> 6	AL049787	1.37E-05	5.01E-06	7.11E-06	0.311278	
<u>134</u> 7	AL049963	0.0003443	4.67E-05	8.36E-07	-0.74421	LOC64 116
<u>134</u> 8	AL050084	7.44E-05	1.61E-06	5.26E-05	0.509331	DC8
<u>134</u> 9	AL050087	2.11E-06	2.48E-06	1.27E-07	-0.31279	KIAA1 785
<u>135</u> 0	AL050196	1.37E-05	5.01E-06	2.00E-05	-0.24688	DKFZP 586D22 23
<u>135</u> 1	AL050281	0.0003443	0.0002051	2.85E-06	0.30517	NAG
<u>135</u> 2	AL050353	0.0003443	2.35E-05	4.42E-06	0.179352	OIP2
<u>135</u> 3	AL050371	0.0003443	2.35E-05	3.70E-06	0.493288	PISD
<u>135</u> 4	AL080071	0.0003443	0.0003041	3.12E-06	0.237367	DKFZP 564M0 82
<u>135</u> 5	AL080141	1.37E-05	5.01E-06	2.42E-07	0.330868	SEC31 B-1
<u>135</u> 6	AL096780	1.37E-05	5.05E-07	2.13E-06	0.34487	CHKL
<u>135</u> 7	AW051579	1.37E-05	1.61E-06	7.58E-07	0.593476	FLJ105 12
<u>135</u> 8	D10704	1.37E-05	1.75E-05	4.69E-07	-0.36791	CHK
<u>135</u> 9	D13891	2.11E-06	2.48E-06	4.57E-05	-0.20577	ID2
<u>136</u> 0	D30758	2.11E-06	1.99E-06	1.58E-05	0.27738	CENTB 1
<u>136</u> 1	D30783	2.57E-08	2.83E-08	8.95E-10	-1.65011	EREG
<u>136</u> 2	D49677	7.44E-05	7.05E-06	4.18E-06	0.198707	U2AF1 RS2
<u>136</u> 3	D50406	1.37E-05	3.86E-06	2.65E-05	0.461907	RECK
<u>136</u> 4	D50525	0.0003443	4.67E-05	3.02E-06	0.486698	
<u>136</u> 5	D78579	1.37E-05	7.05E-06	4.25E-07	-1.65638	NR4A3
<u>136</u> 6	D78579	7.44E-05	7.05E-06	9.62E-07	-1.61438	NR4A3
<u>136</u> 7	D80011	7.44E-05	1.61E-06	4.20E-07	-0.35073	KIAA0 189
<u>136</u> 8	D87119	7.44E-05	2.35E-05	1.80E-06	0.425625	GS3955
<u>136</u> 9	D87119	7.44E-05	5.23E-05	4.62E-06	0.557116	GS3955
<u>137</u> 0	D87466	1.37E-05	8.66E-06	1.49E-07	0.466046	KIAA0 276
<u>137</u> 1	HG1103- HT1103	1.37E-05	1.61E-06	1.16E-07	-0.39165	

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<u>137</u> <u>2</u>	HG2007- HT2056	7.44E-05	9.64E-05	4.01E-06	-0.41408	
<u>137</u> <u>3</u>	HG2724- HT2820	1.37E-05	3.06E-05	5.17E-06	-1.33814	
<u>137</u> <u>4</u>	HG3227- HT3404	2.64E-07	1.72E-07	1.68E-08	-0.25361	
<u>137</u> <u>5</u>	HG4582- HT4987	7.44E-05	2.35E-05	4.63E-07	-0.39588	
<u>137</u> <u>6</u>	J02939	7.44E-05	1.61E-06	2.16E-07	-0.87844	SLC3A 2
<u>137</u> <u>7</u>	J02973	1.37E-05	5.05E-07	2.93E-07	-1.30804	THBD
<u>137</u> <u>8</u>	J03258	0.0003443	0.0001695	1.21E-06	-0.58295	VDR
<u>137</u> <u>9</u>	J04130	0.0003443	2.35E-05	3.02E-06	-0.62071	SCYA4
<u>138</u> <u>0</u>	L04733	0.0013772	2.35E-05	8.84E-07	0.306455	KNS2
<u>138</u> <u>1</u>	L05424	2.11E-06	1.33E-07	2.27E-09	-0.58081	CD44
<u>138</u> <u>2</u>	L12002	7.44E-05	4.67E-05	1.23E-06	0.286717	ITGA4
<u>138</u> <u>3</u>	L13740	2.64E-07	2.19E-08	5.83E-08	-1.45891	NR4A1
<u>138</u> <u>4</u>	L13740	1.37E-05	5.01E-06	9.10E-08	-0.61928	NR4A1
<u>138</u> <u>5</u>	L13773	1.37E-05	1.75E-05	6.44E-07	0.247919	MLLT2
<u>138</u> <u>6</u>	L16499	1.37E-05	8.66E-06	5.12E-06	0.374296	HHEX
<u>138</u> <u>7</u>	L20941	2.64E-07	1.33E-07	1.78E-06	-0.58618	FTH1
<u>138</u> <u>8</u>	L22075	2.64E-07	2.49E-07	1.10E-08	-0.55736	GNA13
<u>138</u> <u>9</u>	L22569	1.37E-05	8.66E-06	1.52E-06	0.318129	CTSB
<u>139</u> <u>0</u>	L25665	0.0003443	0.0001695	3.34E-06	-0.4513	GNL1
<u>139</u> <u>1</u>	L33881	2.64E-07	1.72E-07	5.06E-08	-0.59585	PRKCI
<u>139</u> <u>2</u>	L40377	1.37E-05	5.05E-07	3.49E-07	-0.79409	SERPI NB8
<u>139</u> <u>3</u>	L47738	2.57E-08	4.01E-09	7.54E-09	0.31646	PIR121
<u>139</u> <u>4</u>	L78132	7.44E-05	5.23E-05	5.15E-07	0.358576	LGALS 8
<u>139</u> <u>5</u>	M12267	0.0003443	0.0001695	4.07E-06	-0.3279	OAT
<u>139</u> <u>6</u>	M12959	7.44E-05	2.58E-05	1.61E-06	0.128482	TRA@
<u>139</u> <u>7</u>	M15330	8.55E-11	8.55E-11	2.49E-12	-2.13825	IL1B
<u>139</u> <u>8</u>	M17017	7.44E-05	0.0001187	1.43E-06	-1.74073	IL8

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<u>139</u> 9	M22919	2.64E-07	3.12E-07	9.52E-08	-0.81053	MYL6
<u>140</u> 0	M23114	2.11E-06	4.31E-06	1.59E-07	-0.96141	ATP2A 2
<u>140</u> 1	M24194	7.44E-05	1.61E-06	4.38E-06	0.560895	GNB2L 1
<u>140</u> 2	M24283	0.0003443	4.67E-05	3.71E-06	-1.32611	ICAM1
<u>140</u> 3	M24895	2.11E-06	1.33E-07	1.72E-08	0.476779	AMY2 B
<u>140</u> 4	M26683	7.44E-05	0.0001187	3.70E-06	-0.16179	SCYA2
<u>140</u> 5	M27492	0.0003443	0.0004017	2.01E-06	-0.32619	IL1R1
<u>140</u> 6	M28130	7.44E-05	4.67E-05	8.02E-07	-2.27292	IL8
<u>140</u> 7	M31165	7.44E-05	5.23E-05	1.38E-06	-0.34617	TNFAI P6
<u>140</u> 8	M31523	1.37E-05	1.75E-05	2.09E-06	0.36898	TCF3
<u>140</u> 9	M36821	1.37E-05	8.66E-06	2.21E-07	-0.36334	GRO3
<u>141</u> 0	M55153	7.44E-05	2.58E-05	4.77E-06	-0.27465	TGM2
<u>141</u> 1	M58603	7.44E-05	5.23E-05	1.28E-06	-0.73537	NFKB1
<u>141</u> 2	M59040	0.0013772	2.35E-05	2.82E-06	-0.46271	CD44
<u>141</u> 3	M60784	7.44E-05	5.23E-05	1.24E-06	0.559903	SNRPA
<u>141</u> 4	M60922	7.44E-05	1.51E-05	4.47E-08	0.39657	FLOT2
<u>141</u> 5	M62403	7.44E-05	5.23E-05	5.57E-07	-0.53749	IGFBP 4
<u>141</u> 6	M63256	0.0003443	5.92E-05	6.54E-07	0.454561	CDR2
<u>141</u> 7	M63904	2.57E-08	1.03E-08	5.38E-09	-0.59612	GNA15
<u>141</u> 8	M63978	0.0003443	4.67E-05	1.77E-06	-0.44762	VEGF
<u>141</u> 9	M64571	1.84E-09	1.84E-09	2.41E-11	0.416659	MAP4
<u>142</u> 0	M69199	2.11E-06	1.99E-06	1.45E-07	-1.9021	G0S2
<u>142</u> 1	M73547	1.37E-05	5.01E-06	9.20E-08	0.438897	D5S346
<u>142</u> 2	M74525	2.11E-06	2.48E-06	3.50E-07	-0.61792	UBE2B
<u>142</u> 3	M80244	0.0003443	7.05E-06	2.72E-06	-0.8522	SLC7A 5
<u>142</u> 4	M84443	1.37E-05	5.05E-07	4.08E-07	0.303567	GALK2
<u>142</u> 5	M94856	7.44E-05	5.23E-05	4.99E-06	-0.23847	FABP5

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<u>142</u> <u>6</u>	M95678	0.0003443	7.05E-06	2.00E-06	0.432923	PLCB2
<u>142</u> <u>7</u>	M98833	7.44E-05	1.61E-06	1.52E-06	0.434288	FLI1
<u>142</u> <u>8</u>	N23137	2.11E-06	2.48E-06	2.06E-07	0.247311	MPHO SPH9
<u>142</u> <u>9</u>	N23137	0.0013772	0.0001695	4.12E-06	0.244083	MPHO SPH9
<u>143</u> <u>0</u>	N30151	7.44E-05	1.61E-06	5.05E-05	0.393521	STX16
<u>143</u> <u>1</u>	N42007	2.11E-06	2.48E-06	9.19E-05	0.167986	NUP50
<u>143</u> <u>2</u>	N53547	7.44E-05	8.56E-05	1.80E-07	0.296678	MGC55 08
<u>143</u> <u>3</u>	N90862	1.37E-05	5.05E-07	3.28E-08	0.43576	VAMP 8
<u>143</u> <u>4</u>	N90866	2.64E-07	8.23E-08	2.76E-08	0.304525	CDW52
<u>143</u> <u>5</u>	N98667	1.37E-05	8.66E-06	3.38E-07	0.367127	KIAA1 696
<u>143</u> <u>6</u>	R90942	1.37E-05	5.01E-06	1.05E-05	-0.17696	ST6GA LNACI V
<u>143</u> <u>7</u>	S52028	2.11E-06	5.05E-07	9.62E-08	-0.81662	CTH
<u>143</u> <u>8</u>	S68134	0.0003443	7.05E-06	8.37E-07	-1.64652	CREM
<u>143</u> <u>9</u>	S68134	0.0003443	7.05E-06	4.35E-06	-2.47105	CREM
<u>144</u> <u>0</u>	S68271	0.0003443	7.05E-06	3.03E-06	-2.07185	CREM
<u>144</u> <u>1</u>	S73591	1.37E-05	1.51E-05	4.68E-06	0.414777	VDUP1
<u>144</u> <u>2</u>	S76638	7.44E-05	2.35E-05	7.47E-07	-0.35416	NFKB2
<u>144</u> <u>3</u>	S78187	7.44E-05	1.61E-06	1.95E-05	0.203265	CDC25 B
<u>144</u> <u>4</u>	S78771	0.0003443	5.92E-05	2.55E-06	-0.31389	BRD2
<u>144</u> <u>5</u>	S81914	0.0003443	7.05E-06	4.18E-07	-1.59146	IER3
<u>144</u> <u>6</u>	U02020	1.37E-05	8.66E-06	1.37E-06	-1.13863	PBEF
<u>144</u> <u>7</u>	U02570	1.37E-05	2.81E-05	1.26E-06	0.432431	ARHG API
<u>144</u> <u>8</u>	U03634	1.37E-05	1.75E-05	1.00E-06	-0.21467	LBC
<u>144</u> <u>9</u>	U04636	0.0003443	5.92E-05	2.81E-06	-1.85123	PTGS2
<u>145</u> <u>0</u>	U05681	7.44E-05	5.23E-05	3.37E-06	-0.35383	BCL3
<u>145</u> <u>1</u>	U07563	7.44E-05	2.35E-05	4.91E-07	-0.25016	ABL1
<u>145</u>	U09937	1.84E-09	4.16E-10	2.04E-09	-1.21578	PLAUR

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<u>2</u>						
<u>145</u> 3	U10117	7.44E-05	1.51E-05	4.07E-06	0.563673	SCYE1
<u>145</u> 4	U11732	1.37E-05	3.86E-06	3.04E-07	-0.22574	ETV6
<u>145</u> 5	U12767	7.44E-05	1.61E-06	2.84E-07	-1.23483	NR4A3
<u>145</u> 6	U12767	0.0003443	7.05E-06	2.55E-07	-2.13744	NR4A3
<u>145</u> 7	U13695	7.44E-05	1.61E-06	1.11E-05	0.805607	PMS1
<u>145</u> 8	U15552	1.37E-05	5.01E-06	1.67E-05	-0.68094	HSU15 552
<u>145</u> 9	U17760	0.0003443	7.05E-06	4.25E-06	-0.84472	LAMB 3
<u>146</u> 0	U18300	7.44E-05	0.000129	2.43E-06	0.183171	DDB2
<u>146</u> 1	U20982	2.11E-06	1.99E-06	1.20E-08	-0.67125	IGFBP 4
<u>146</u> 2	U24166	7.44E-05	1.61E-06	7.52E-06	-0.45293	MAPR E1
<u>146</u> 3	U28811	0.0003443	7.05E-06	1.33E-06	0.32855	GLG1
<u>146</u> 4	U29171	1.37E-05	5.01E-06	1.10E-06	-0.6032	CSNK1 D
<u>146</u> 5	U29175	1.37E-05	8.66E-06	1.90E-06	0.266342	SMAR CA4
<u>146</u> 6	U29185	2.11E-06	7.73E-07	1.56E-07	-1.08006	PRNP
<u>146</u> 7	U29344	2.11E-06	9.54E-07	2.35E-07	-0.43842	FASN
<u>146</u> 8	U29656	2.11E-06	7.73E-07	7.52E-08	0.353186	NME3
<u>146</u> 9	U29656	7.44E-05	0.000129	4.31E-06	0.471876	NME3
<u>147</u> 0	U32324	1.37E-05	5.05E-07	3.21E-08	0.334966	IL11RA
<u>147</u> 1	U33017	2.64E-07	1.72E-07	5.20E-07	0.373581	SLAM
<u>147</u> 2	U38847	7.44E-05	2.35E-05	9.91E-07	0.222946	TARBP 1
<u>147</u> 3	U41815	1.37E-05	5.05E-07	2.16E-07	-0.96931	NUP98
<u>147</u> 4	U43774	0.0003443	2.35E-05	8.80E-07	-0.39938	FCAR
<u>147</u> 5	U44839	2.11E-06	9.54E-07	2.54E-07	-0.97008	USP11
<u>147</u> 6	U47414	2.11E-06	9.54E-07	2.31E-06	0.370736	CCNG2
<u>147</u> 7	U47927	2.57E-08	2.83E-08	5.53E-09	0.545592	USP5
<u>147</u> 8	U48807	1.37E-05	5.01E-06	4.97E-08	-0.93178	DUSP4

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<u>147</u> <u>9</u>	U49187	7.44E-05	1.51E-05	1.48E-06	0.671467	C6orf32
<u>148</u> <u>0</u>	U49187	7.44E-05	9.64E-05	3.53E-06	0.511392	C6orf32
<u>148</u> <u>1</u>	U49844	7.44E-05	7.05E-06	3.67E-07	0.47168	ATR
<u>148</u> <u>2</u>	U50527	1.37E-05	5.01E-06	5.11E-06	0.416543	
<u>148</u> <u>3</u>	U50928	7.44E-05	1.61E-06	4.72E-06	0.302213	PKD2
<u>148</u> <u>4</u>	U51007	7.44E-05	1.51E-05	1.49E-06	0.309996	PSMD4
<u>148</u> <u>5</u>	U51205	1.37E-05	5.05E-07	2.65E-07	-0.76279	COP9
<u>148</u> <u>6</u>	U51478	7.44E-05	2.35E-05	6.10E-07	-0.58	ATP1B 3
<u>148</u> <u>7</u>	U51920	2.11E-06	1.33E-07	7.01E-08	-0.28142	SRP54
<u>148</u> <u>8</u>	U52960	2.11E-06	1.61E-06	1.51E-07	-0.84863	SURB7
<u>148</u> <u>9</u>	U56998	0.0003443	7.05E-06	3.70E-06	-0.74294	CNK
<u>149</u> <u>0</u>	U64197	1.84E-09	1.84E-09	2.95E-10	-0.62373	SCYA2 0
<u>149</u> <u>1</u>	U65928	7.44E-05	4.67E-05	2.85E-07	0.408918	COPS5
<u>149</u> <u>2</u>	U66063	2.11E-06	2.48E-06	4.70E-07	0.277185	CAMK 2G
<u>149</u> <u>3</u>	U70735	1.37E-05	8.66E-06	1.82E-06	0.249185	MOV34 -34KD
<u>149</u> <u>4</u>	U72066	2.57E-08	1.03E-08	4.33E-08	-0.34482	RBBP8
<u>149</u> <u>5</u>	U75968	2.11E-06	1.99E-06	4.36E-06	0.139542	DDX11
<u>149</u> <u>6</u>	U78107	8.55E-11	3.69E-11	4.04E-12	-0.43769	NAPG
<u>149</u> <u>7</u>	U78302	2.64E-07	1.72E-07	2.41E-08	0.329878	DECR1
<u>149</u> <u>8</u>	U78798	2.57E-08	4.01E-09	1.11E-06	-0.3172	TRAF6
<u>149</u> <u>9</u>	U84007	7.44E-05	1.61E-06	0.000235	0.236422	AGL
<u>150</u> <u>0</u>	U85245	7.44E-05	1.61E-06	4.57E-07	0.365266	PIP5K2 B
<u>150</u> <u>1</u>	U88629	0.0003443	4.67E-05	9.58E-07	-0.32607	ELL2
<u>150</u> <u>2</u>	U90917	1.37E-05	1.61E-06	3.89E-07	0.433406	FOX M1
<u>150</u> <u>3</u>	U91543	2.64E-07	3.12E-07	2.01E-07	0.478678	CHD3
<u>150</u> <u>4</u>	U91616	1.37E-05	5.05E-07	1.27E-07	-0.80419	NFKBI E
<u>150</u> <u>5</u>	U96876	7.44E-05	1.61E-06	3.54E-06	-0.45317	INSIG1

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<u>150</u> 6	U97105	1.37E-05	1.75E-05	6.56E-07	1.00615	DPYSL 2
<u>150</u> 7	W28319	1.37E-05	5.01E-06	1.50E-05	0.294631	FBLN1
<u>150</u> 8	W28612	1.37E-05	5.01E-06	1.70E-06	-0.25519	
<u>150</u> 9	W28743	0.0003443	7.05E-06	2.78E-06	-0.28926	PP1628
<u>151</u> 0	X00737	2.11E-06	9.54E-07	5.21E-08	-0.67074	NP
<u>151</u> 1	X02152	1.37E-05	5.05E-07	4.63E-08	-0.75601	LDHA
<u>151</u> 2	X04366	1.37E-05	2.81E-05	5.11E-06	0.346076	CAPN1
<u>151</u> 3	X04500	2.64E-07	1.72E-07	3.43E-10	-2.12121	IL1B
<u>151</u> 4	X06256	1.37E-05	2.35E-05	4.89E-07	-0.7357	ITGA5
<u>151</u> 5	X13403	7.44E-05	5.92E-05	4.21E-07	0.146032	POU2F 1
<u>151</u> 6	X15217	7.44E-05	4.67E-05	3.77E-07	-0.2371	SKIL
<u>151</u> 7	X15218	8.55E-11	8.55E-11	1.40E-10	-1.41501	SKI
<u>151</u> 8	X16396	0.0003443	0.0002051	3.27E-06	-0.6151	MTHF D2
<u>151</u> 9	X16706	7.44E-05	1.61E-06	1.23E-06	-1.09747	FOSL2
<u>152</u> 0	X53586	1.37E-05	8.66E-06	3.40E-07	0.51291	ITGA6
<u>152</u> 1	X58141	7.44E-05	9.64E-05	1.75E-06	0.384254	ADD1
<u>152</u> 2	X61123	7.44E-05	0.0001057	4.17E-07	-1.15256	BTG1
<u>152</u> 3	X61498	7.44E-05	1.61E-06	8.80E-07	-0.49884	NFKB2
<u>152</u> 4	X62535	1.37E-05	1.61E-06	5.68E-07	0.243937	DGKA
<u>152</u> 5	X63368	2.11E-06	5.05E-07	2.30E-08	-0.55432	DNAJB 2
<u>152</u> 6	X64330	7.44E-05	7.05E-06	2.27E-06	0.297851	ACLY
<u>152</u> 7	X66363	2.64E-07	1.72E-07	6.53E-07	-0.24505	PCTK1
<u>152</u> 8	X66436	0.0003443	8.56E-05	1.88E-06	-0.26662	
<u>152</u> 9	X66945	7.44E-05	1.51E-05	1.91E-07	-0.35494	FGFR1
<u>153</u> 0	X68452	2.57E-08	4.01E-09	9.12E-11	-0.26618	CCND2
<u>153</u> 1	X69392	2.64E-07	1.33E-07	1.10E-08	0.297444	RPL26
<u>153</u> 2	X70218	1.37E-05	3.06E-05	2.44E-06	-0.74691	PPP4C

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<u>153</u> 3	X74039	1.84E-09	4.16E-10	1.51E-10	-0.67381	PLAUR
<u>153</u> 4	X79882	1.37E-05	5.05E-07	1.78E-07	0.520965	MVP
<u>153</u> 5	X82153	7.44E-05	1.61E-06	2.27E-06	0.47844	CTSK
<u>153</u> 6	X82209	2.11E-06	5.05E-07	1.37E-09	-0.45281	MN1
<u>153</u> 7	X87949	7.44E-05	1.61E-06	4.05E-07	-0.54468	HSPA5
<u>153</u> 8	X98172	7.44E-05	4.67E-05	5.29E-07	0.507556	CASP8
<u>153</u> 9	X99142	1.37E-05	8.66E-06	1.24E-06	-0.29773	KRTH B6
<u>154</u> 0	X99656	1.37E-05	5.05E-07	1.68E-06	-0.23553	SH3GL 1
<u>154</u> 1	Y00630	2.57E-08	3.70E-08	6.65E-09	-2.38485	SERPI NB2
<u>154</u> 2	Y08683	1.37E-05	5.05E-07	4.71E-06	0.492738	CPT1B
<u>154</u> 3	Y14768	1.37E-05	5.05E-07	7.26E-08	0.248383	LTB
<u>154</u> 4	Y18004	1.37E-05	5.01E-06	4.19E-07	-0.9465	SCML2
<u>154</u> 5	Z11697	1.37E-05	5.05E-07	3.55E-06	-1.21033	CD83
<u>154</u> 6	Z14000	0.0003443	0.0002051	3.91E-06	-0.33734	RING1
<u>154</u> 7	Z24724	2.64E-07	2.19E-08	5.96E-09	-1.10426	
<u>154</u> 8	Z32860	1.37E-05	5.01E-06	7.81E-06	0.133192	
<u>154</u> 9	Z93930	2.64E-07	2.49E-07	2.42E-05	-0.39839	XBP1

Table III: Differential Gene Expression in acute MS relapse vs. remission

<u>SEQ ID</u> <u>NO:</u>	Identifier	TNOM PValue	Info PValue	t-Test PValue	Log Fold Change	Symbol
<u>1550</u>	AI828210	5.38E-06	5.38E-06	8.37E-06	-0.18947	KIAA0284
<u>1551</u>	D14710	6.73E-05	3.19E-05	2.89E-05	-0.35496	ATP5A1
<u>1552</u>	U46692	6.73E-05	3.19E-05	0.00028 4	-0.49741	CSTB
<u>1553</u>	AF061261	6.73E-05	3.19E-05	3.22E-05	-0.28274	MBLL
<u>1554</u>	U51712	6.73E-05	3.19E-05	0.00346 4	-0.42775	SMAP31
<u>1555</u>	AB014558	6.73E-05	4.25E-05	0.00047 3	0.69478 4	CRY2
<u>1556</u>	AB007936	6.73E-05	4.25E-05	0.00095 8	-0.25409	KIAA0467
<u>1557</u>	AC002115	6.73E-05	4.25E-05	0.00014 7	0.62284 1	MGC10433

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<u>1558</u>	AF052160	6.73E-05	4.25E-05	0.00018 2	-0.46468	
<u>1559</u>	S78085	0.00053 8	0.00010 4	0.00010 2	-0.55064	PDCD2
<u>1560</u>	AL096719	0.00053 8	0.00010 4	0.00008 9	-0.22287	PFN2
<u>1561</u>	U61234	0.00053 8	0.00010 4	0.00084 4	0.29918 2	TBCC
<u>1562</u>	X12451	0.00053 8	0.00025 1	0.00087 6	1.04444	CTSL
<u>1563</u>	M35531	0.00053 8	0.00025 1	0.00024 1	-0.20303	FUT1
<u>1564</u>	M64174	0.00053 8	0.00025 1	3.43E-05	-0.5508	JAK1
<u>1565</u>	AB018269	0.00053 8	0.00025 1	7.39E-05	-0.18186	KIAA0726
<u>1566</u>	R92331	0.00053 8	0.00025 1	0.00010 4	0.28999 4	MT1E
<u>1567</u>	U19487	0.00053 8	0.00025 1	0.00173 8	-0.25888	PTGER2
<u>1568</u>	AF040965	0.00053 8	0.00025 1	0.00077 5	0.48898	RES4-25
<u>1569</u>	U07563	0.00053 8	0.00025 1	3.61E-05	-0.16779	RRP4
<u>1570</u>	L40377	0.00053 8	0.00025 1	0.00947 9	0.45241 6	SERPINB8
<u>1571</u>	AL080234	0.00053 8	0.00025 1	0.00037 7	-0.52631	
<u>1572</u>	AJ242015	0.00309 6	0.00039	0.01395 7	0.28161 8	ADAM28
<u>1573</u>	D86324	0.00309 6	0.00039	0.00180 1	-0.34728	CMAH
<u>1574</u>	M94065	0.00309 6	0.00039	0.00239 1	-0.13976	DHODH
<u>1575</u>	AC004382	0.00309 6	0.00039	0.00012 1	-0.20383	DKFZP434K046
<u>1576</u>	X54326	0.00309 6	0.00039	0.00273 4	-0.39559	EPRS
<u>1577</u>	W25921	0.00309 6	0.00039	9.41E-05	-0.39027	GNS
<u>1578</u>	X92110	0.00309 6	0.00039	0.00010 3	-1.00581	HCGVIII-1
<u>1579</u>	W28589	0.00309 6	0.00039	0.00022 5	-0.20949	HSPD1
<u>1580</u>	S66213	0.00309 6	0.00039	0.00013 4	-0.28606	ITGA6
<u>1581</u>	AB011158	0.00053 8	0.00039	0.00004 7	-0.163	KIAA0586
<u>1582</u>	AB023209	0.00309 6	0.00039	0.00335 4	-0.09151	KIAA0992
<u>1583</u>	AF035940	0.00309 6	0.00039	0.00845 7	0.28243 7	MAGOH
<u>1584</u>	M31724	0.00309 6	0.00039	0.00067 1	0.56934 3	PTPN1

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<u>1585</u>	X74262	0.00309 6	0.00039	0.00006 2	-0.37623	RBBP4
<u>1586</u>	J05249	0.00309 6	0.00039	0.00045	-0.52346	RPA2
<u>1587</u>	M55531	0.00309 6	0.00039	0.02305 4	-0.22329	SLC2A5
<u>1588</u>	A1865431	0.00309 6	0.00039	0.00027	0.42306 7	TNFRSF5
<u>1589</u>	W28203	0.00309 6	0.00039	0.00798 3	-0.17484	
<u>1590</u>	W28667	0.00309 6	0.00039	0.00084 6	-0.49488	
<u>1591</u>	D13628	0.00053 8	0.00052 9	0.03433 5	-0.10398	ANGPT1
<u>1592</u>	U03271	0.00053 8	0.00052 9	0.00028 6	-0.1675	CAPZB
<u>1593</u>	U05259	0.00053 8	0.00052 9	0.00358 9	0.55132 8	CD79A
<u>1594</u>	L13278	0.00053 8	0.00052 9	7.27E-05	-0.43636	CRYZ
<u>1595</u>	M91670	0.00053 8	0.00052 9	0.00347 2	0.60025 5	E2-EPF
<u>1596</u>	AB029030	0.00053 8	0.00052 9	0.00065 7	-0.13458	KIAA1107
<u>1597</u>	AF016098	0.00053 8	0.00052 9	0.00043 3	-0.16189	NRP2
<u>1598</u>	X76091	0.00053 8	0.00052 9	0.00469 1	0.16134 9	RFX2
<u>1599</u>	U52191	0.00053 8	0.00052 9	0.00229	1.2356	SMCY
<u>1600</u>	AA203345	0.00053 8	0.00052 9	0.00122 8	-0.50409	STX16
<u>1601</u>	U96113	0.00053 8	0.00052 9	0.00039 4	-0.41425	WWP1
<u>1602</u>	AL050263	0.00053 8	0.00052 9	0.00022 4	-0.15981	
<u>1603</u>	Z48579	0.00053 8	0.00079 9	0.00018 4	-0.30836	ADAM10
<u>1604</u>	M31452	0.00053 8	0.00079 9	0.00289 9	-0.13022	C4BPA
<u>1605</u>	AC003107	0.00053 8	0.00079 9	0.00026 2	-0.16818	COMP
<u>1606</u>	M91670	0.00053 8	0.00079 9	0.00079 2	0.41925	E2-EPF
<u>1607</u>	AB023235	0.00053 8	0.00079 9	0.00134 8	-0.30138	KIAA1018
<u>1608</u>	X89960	0.00053 8	0.00079 9	0.02683 7	-0.35169	MCSP
<u>1609</u>	D55654	0.00053 8	0.00079 9	0.01933 1	-0.2254	MDH1
<u>1610</u>	U02683	0.00053 8	0.00079 9	0.03003 5	-0.09324	NRF1
<u>1611</u>	S90469	0.00053 8	0.00079 9	0.00078 5	0.23032	POR

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<u>1612</u>	AF020543	0.00053 8	0.00079 9	0.00428 6	-0.25061	PPT2
<u>1613</u>	M34181	0.00053 8	0.00079 9	0.00005 5	-0.5883	PRKACB
<u>1614</u>	AF095448	0.00053 8	0.00079 9	0.00058 8	-0.24961	RAI3
<u>1615</u>	AF027150	0.00053 8	0.00079 9	0.00097 9	-0.16012	SIP1
<u>1616</u>	X02344	0.00053 8	0.00079 9	0.00091 8	0.43053 1	TUBB2
<u>1617</u>	X02344	0.00053 8	0.00079 9	0.00222 5	0.29668 2	TUBB2
<u>1618</u>	AI701164	0.00053 8	0.00079 9	0.00011 5	-0.23639	UBE2G1
<u>1619</u>	U96113	0.00053 8	0.00079 9	9.77E-05	-0.45711	WWP1
<u>1620</u>	AF016052	0.00053 8	0.00079 9	0.00125 4	-0.19092	ZNF24
<u>1621</u>	U21551	0.00309 6	0.00103	0.00083 6	0.27821 9	BCAT1
<u>1622</u>	X77794	0.00309 6	0.00103	3.72E-05	-0.81938	CCNG1
<u>1623</u>	AF070530	0.00309 6	0.00103	0.01490 8	0.27694 2	CL24751
<u>1624</u>	AB002331	0.00309 6	0.00103	0.00171 4	-0.17304	DATF1
<u>1625</u>	AI004207	0.00309 6	0.00103	0.00076 2	-0.1648	FLJ00002
<u>1626</u>	L76200	0.00309 6	0.00103	0.00082 4	0.44447 9	GUK1
<u>1627</u>	U26398	0.00309 6	0.00103	0.00118 2	-0.29185	INPP4A
<u>1628</u>	U69883	0.00309 6	0.00103	0.00792 2	0.10361 4	KCNN1
<u>1629</u>	M13452	0.00309 6	0.00103	0.00046 7	0.40585 6	LMNA
<u>1630</u>	AA126505	0.00309 6	0.00103	0.002	-0.39781	NCAM1
<u>1631</u>	U88620	0.00309 6	0.00103	0.00756 2	-0.3532	OGG1
<u>1632</u>	M33336	0.00309 6	0.00103	0.00156 8	-0.26454	PRKAR1A
<u>1633</u>	AB015982	0.00309 6	0.00103	0.00038 2	-0.27486	PRKCN
<u>1634</u>	H68340	0.00309 6	0.00103	0.00122 2	0.51635 2	RNAHP
<u>1635</u>	M28225	0.00309 6	0.00103	0.00068 6	1.0733	SCYA2
<u>1636</u>	X97064	0.00309 6	0.00103	0.00320 7	-0.19906	SEC23A
<u>1637</u>	X68560	0.00309 6	0.00103	0.00785 6	0.43756 7	SP3
<u>1638</u>	AF064094	0.00309 6	0.00103	0.00028 7	-0.19385	TADA2L

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<u>1639</u>	AB007872	0.00309 6	0.00103	0.00011 9	-0.20778	ZNF264
<u>1640</u>	W28255	0.01362 2	0.00169 8	0.00140 7	-0.24426	76P
<u>1641</u>	AB007934	0.00309 6	0.00169 8	0.00318 2	-0.24405	ACF7
<u>1642</u>	AL049954	0.01362 2	0.00169 8	0.02419 3	-0.25818	AHCYL1
<u>1643</u>	U90546	0.00309 6	0.00169 8	0.00010 5	-0.34074	BTN3A2
<u>1644</u>	AL035291	0.01362 2	0.00169 8	0.00766 8	0.50610 7	CH1
<u>1645</u>	AF031647	0.01362 2	0.00169 8	0.00475 5	0.25724 4	COPS3
<u>1646</u>	M57888	0.00309 6	0.00169 8	0.00454 9	-0.64384	CTLA1
<u>1647</u>	AF000987	0.00309 6	0.00169 8	0.00945 5	0.24758 6	EIF1AY
<u>1648</u>	U55766	0.00309 6	0.00169 8	0.00066 7	0.79501	HRB2
<u>1649</u>	L12002	0.01362 2	0.00169 8	0.00576 5	-0.1942	ITGA4
<u>1650</u>	D14661	0.01362 2	0.00169 8	0.01132 4	0.39126 7	KIAA0105
<u>1651</u>	D63875	0.01362 2	0.00169 8	0.00219 2	-0.36411	KIAA0155
<u>1652</u>	AB018285	0.01362 2	0.00169 8	0.00154 5	0.55099 4	KIAA0742
<u>1653</u>	AB023180	0.01362 2	0.00169 8	0.00164 2	0.25347 9	KIAA0963
<u>1654</u>	AL080102	0.01362 2	0.00169 8	0.00365 1	0.43575 1	KIAA1856
<u>1655</u>	M22637	0.01362 2	0.00169 8	0.00379 2	-0.27794	LYL1
<u>1656</u>	D85131	0.01362 2	0.00169 8	0.00512 6	-0.12291	MAZ
<u>1657</u>	D37965	0.01362 2	0.00169 8	0.01111	-0.09143	PDGFRL
<u>1658</u>	Y18207	0.00309 6	0.00169 8	0.00347 4	-0.17238	PPP1R3C
<u>1659</u>	L49229	0.01362 2	0.00169 8	0.00033 6	-0.36639	RB1
<u>1660</u>	U77664	0.01362 2	0.00169 8	0.00235 4	0.19366 6	RPP38
<u>1661</u>	AL040137	0.00309 6	0.00169 8	0.00838 4	-0.23366	SAP18
<u>1662</u>	D31764	0.01362 2	0.00169 8	0.01295	-0.13299	SNX17
<u>1663</u>	X57655	0.01362 2	0.00169 8	0.00247 6	-0.17382	SPINK2
<u>1664</u>	M19267	0.01362 2	0.00169 8	0.01358 2	0.26288 6	TPM1
<u>1665</u>	M12959	0.01362 2	0.00169 8	0.00390 7	-0.08942	TRA@

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<u>1666</u>	AA160724	0.01362 2	0.00169 8	0.00569 5	0.26700 2	
<u>1667</u>	U37122	0.00309 6	0.00213 5	0.00057 1	-0.59281	ADD3
<u>1668</u>	AA903720	0.00309 6	0.00213 5	0.00255 7	0.24461 8	BAP29
<u>1669</u>	M93107	0.00309 6	0.00213 5	0.00187	-0.19146	BDH
<u>1670</u>	M17754	0.00309 6	0.00213 5	0.01033 3	-0.10769	BN51T
<u>1671</u>	X15882	0.00309 6	0.00213 5	0.0023	0.22776 9	COL6A2
<u>1672</u>	D15057	0.00309 6	0.00213 5	0.00281 4	-0.26776	DAD1
<u>1673</u>	S62138	0.00309 6	0.00213 5	0.00244 2	1.1158	DDIT3
<u>1674</u>	AB026436	0.00309 6	0.00213 5	0.01118 9	0.71191 9	DUSP10
<u>1675</u>	W27152	0.00309 6	0.00213 5	0.00949 8	-0.1614	FLJ10569
<u>1676</u>	AB001106	0.00309 6	0.00213 5	0.00240 8	0.44461 7	GMFB
<u>1677</u>	D87120	0.00309 6	0.00213 5	0.00475	0.23670 6	GS3786
<u>1678</u>	AI200373	0.00309 6	0.00213 5	0.00382 2	-0.31066	H2AFI
<u>1679</u>	U15085	0.00309 6	0.00213 5	0.01174 3	0.32885 7	HLA-DMB
<u>1680</u>	U90549	0.00309 6	0.00213 5	0.00165 4	-0.26437	HMG17L3
<u>1681</u>	AI760162	0.00309 6	0.00213 5	0.00131 3	-0.47775	HT012
<u>1682</u>	AB018306	0.00309 6	0.00213 5	0.00037 1	0.31620 2	KIAA0763
<u>1683</u>	D14696	0.00309 6	0.00213 5	0.01694 9	0.25923 9	LAPTM4A
<u>1684</u>	U23852	0.00309 6	0.00213 5	0.00120 7	-0.2593	LCK
<u>1685</u>	U70735	0.00309 6	0.00213 5	0.0002	-0.20846	MOV34-34KD
<u>1686</u>	X79865	0.00309 6	0.00213 5	0.0141	0.41846 6	MRPL12
<u>1687</u>	AI547258	0.00309 6	0.00213 5	0.00122 3	0.26795 1	MT2A
<u>1688</u>	L40387	0.00309 6	0.00213 5	0.00038	0.21197 3	OASL
<u>1689</u>	AB019517	0.00309 6	0.00213 5	0.02300 4	0.21945 3	PKIG
<u>1690</u>	M58459	0.00309 6	0.00213 5	0.00136 2	1.46854	RPS4Y
<u>1691</u>	X57348	0.00309 6	0.00213 5	0.00425 5	0.22047	SFN
<u>1692</u>	M74558	0.00309 6	0.00213 5	0.00120 5	0.21918 5	SIL

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<u>1693</u>	U34044	0.00309 6	0.00213 5	0.00083 1	-0.21289	SPS
<u>1694</u>	U49928	0.00309 6	0.00213 5	0.00088 6	-0.31189	TAB1
<u>1695</u>	X05839	0.00309 6	0.00213 5	0.00874 7	0.21455 2	TGFB1
<u>1696</u>	U16296	0.00309 6	0.00213 5	0.00658 5	-0.14857	TIAM1
<u>1697</u>	U63127	0.00309 6	0.00213 5	0.00053 8	-0.38925	TIC
<u>1698</u>	U03397	0.00309 6	0.00213 5	0.00515 6	-0.34157	TNFRSF9
<u>1699</u>	M21624	0.00309 6	0.00213 5	0.00174 8	-0.51878	TRD@
<u>1700</u>	D83198	0.00309 6	0.00213 5	0.02897 5	-0.17519	YF13H12
<u>1701</u>	HG960- HT960	0.00309 6	0.00213 5	0.00308 9	0.14570 1	
<u>1702</u>	HG4724- HT5166	0.00309 6	0.00213 5	0.00244 6	-0.25728	
<u>1703</u>	D00654	0.00309 6	0.00434 2	9.79E-05	-0.1819	ACTG2
<u>1704</u>	U54645	0.01362 2	0.00434 2	0.00422 8	-0.25281	AK2
<u>1705</u>	M93405	0.00309 6	0.00434 2	0.02065 1	0.12615 6	ALDH6A1
<u>1706</u>	U73960	0.00309 6	0.00434 2	0.00227 9	0.55580 6	ARL4
<u>1707</u>	U26455	0.00309 6	0.00434 2	0.00656 2	-0.53911	ATM
<u>1708</u>	M33519	0.00309 6	0.00434 2	0.01116 9	-0.33327	BAT3
<u>1709</u>	U90028	0.00309 6	0.00434 2	0.00039 6	-0.24971	BICD1
<u>1710</u>	AB002384	0.00309 6	0.00434 2	0.00285 5	-0.46941	C6orf32
<u>1711</u>	M74093	0.00309 6	0.00434 2	0.00076 3	-0.33022	CCNE1
<u>1712</u>	AA203246	0.00309 6	0.00434 2	0.00701 4	-0.16607	CDC2L5
<u>1713</u>	X66358	0.01362 2	0.00434 2	0.00712 2	-0.1886	CDKL1
<u>1714</u>	U30872	0.00309 6	0.00434 2	0.00171 5	-0.164	CENPF
<u>1715</u>	AB020675	0.01362 2	0.00434 2	0.00291 3	-0.25056	CNTNAP2
<u>1716</u>	M13207	0.01362 2	0.00434 2	0.01388 1	0.12224	CSF2
<u>1717</u>	AA173896	0.01362 2	0.00434 2	0.00840 1	0.30513 3	CYB5-M
<u>1718</u>	L78267	0.00309 6	0.00434 2	0.04708 9	0.10394	D15S226E
<u>1719</u>	AL080120	0.01362 2	0.00434 2	0.00183 4	-0.12922	DKFZP564O0423

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<u>1720</u>	U13896	0.01362 2	0.00434 2	0.02048 2	-0.10291	DLG1
<u>1721</u>	AF034970	0.01362 2	0.00434 2	0.01037 1	-0.10568	DOK2
<u>1722</u>	D12686	0.01362 2	0.00434 2	0.00349 3	0.17037 8	EIF4G1
<u>1723</u>	AB002386	0.00309 6	0.00434 2	0.00013 1	-0.39255	EZH1
<u>1724</u>	M15059	0.00309 6	0.00434 2	0.00249 7	0.2061	FCER2
<u>1725</u>	W27545	0.01362 2	0.00434 2	0.00444 5	0.37968 2	FLJ20259
<u>1726</u>	M84443	0.00309 6	0.00434 2	0.00010 1	-0.27085	GALK2
<u>1727</u>	AF029777	0.01362 2	0.00434 2	0.00142 7	-0.22426	GCN5L2
<u>1728</u>	D63876	0.01362 2	0.00434 2	0.00273 7	0.39694 6	GGA3
<u>1729</u>	AB020645	0.00309 6	0.00434 2	0.00390 7	-0.37377	GLS
<u>1730</u>	U77948	0.00309 6	0.00434 2	0.00081 8	-0.35677	GTF2I
<u>1731</u>	AF035555	0.00309 6	0.00434 2	0.01838 8	-0.17666	HADH2
<u>1732</u>	AF055001	0.00309 6	0.00434 2	0.01074 4	0.72471 4	HERPUD1
<u>1733</u>	D32129	0.00309 6	0.00434 2	0.00536 4	-0.13287	HLA-A
<u>1734</u>	AF043586	0.00309 6	0.00434 2	0.00104 7	-0.30021	IGL@
<u>1735</u>	U53831	0.01362 2	0.00434 2	0.01853 7	0.48826 7	IRF7
<u>1736</u>	AB002344	0.00309 6	0.00434 2	0.00165 8	0.70577 5	KIAA0346
<u>1737</u>	AI677689	0.01362 2	0.00434 2	0.00437 5	-0.1411	KIAA0685
<u>1738</u>	AB023153	0.00309 6	0.00434 2	0.04282	-0.39134	KIAA0936
<u>1739</u>	AB023226	0.00309 6	0.00434 2	0.00011 1	-0.71413	KIAA1009
<u>1740</u>	AI148772	0.01362 2	0.00434 2	0.03739	0.53245 4	KYNU
<u>1741</u>	AB006780	0.00309 6	0.00434 2	0.01023 6	0.17836 2	LGALS3
<u>1742</u>	AL050405	0.00309 6	0.00434 2	0.00814 4	0.31184 3	LOC51634
<u>1743</u>	L35253	0.01362 2	0.00434 2	0.00132 4	-0.46397	MAPK14
<u>1744</u>	R93527	0.01362 2	0.00434 2	0.00037 2	0.26420 7	MT1H
<u>1745</u>	AF108145	0.00309 6	0.00434 2	0.00120 6	-0.14877	MYLE
<u>1746</u>	M96980	0.01362 2	0.00434 2	0.00210 6	-0.16409	MYT1

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<u>1747</u>	S76638	0.01362 2	0.00434 2	0.04529	0.17134 4	NFKB2
<u>1748</u>	D88674	0.01362 2	0.00434 2	0.04523 2	0.34641 5	OAZIN
<u>1749</u>	AL050353	0.01362 2	0.00434 2	0.01607 1	-0.11979	OIP2
<u>1750</u>	AL080119	0.00309 6	0.00434 2	0.00196 1	-0.40821	PAI-RBP1
<u>1751</u>	X76770	0.01362 2	0.00434 2	0.00501 1	-0.10613	PAPOLA
<u>1752</u>	D11466	0.00309 6	0.00434 2	0.00975 2	0.73812 7	PIGA
<u>1753</u>	W28299	0.00309 6	0.00434 2	0.00122 5	-0.17755	PINK1
<u>1754</u>	U83981	0.00309 6	0.00434 2	0.01432 7	0.28747	PPP1R15A
<u>1755</u>	X14968	0.01362 2	0.00434 2	0.00472 7	0.10521 5	PRKAR2A
<u>1756</u>	M55284	0.00309 6	0.00434 2	0.00343 5	-0.17401	PRKCH
<u>1757</u>	M15036	0.00309 6	0.00434 2	0.01096 5	-0.25119	PROS1
<u>1758</u>	Y00638	0.00309 6	0.00434 2	0.00497 7	-0.30956	PTPRC
<u>1759</u>	Y00815	0.00309 6	0.00434 2	0.01534 4	0.11693 8	PTPRF
<u>1760</u>	M38258	0.00309 6	0.00434 2	0.00925 2	-0.14193	RARG
<u>1761</u>	AF025654	0.00309 6	0.00434 2	0.00230 2	-0.39122	RNGTT
<u>1762</u>	M60724	0.01362 2	0.00434 2	0.00473 2	-0.22065	RPS6KB1
<u>1763</u>	AB006202	0.01362 2	0.00434 2	0.00302 8	-0.18268	SDHD
<u>1764</u>	AA890010	0.00309 6	0.00434 2	0.00546	-0.21285	SEC22L1
<u>1765</u>	X62822	0.00309 6	0.00434 2	0.03970 7	-0.21593	SIAT1
<u>1766</u>	L41680	0.00309 6	0.00434 2	0.00177 1	-0.16486	SIAT8D
<u>1767</u>	X15217	0.00309 6	0.00434 2	0.00737 7	0.14930 6	SKIL
<u>1768</u>	L13857	0.00309 6	0.00434 2	0.00572 1	-0.11073	SOS1
<u>1769</u>	U09564	0.00309 6	0.00434 2	0.00120 3	-0.27717	SRPK1
<u>1770</u>	Z75330	0.01362 2	0.00434 2	0.03179 6	-0.11359	STAG1
<u>1771</u>	X92762	0.00309 6	0.00434 2	0.00102 1	-0.27946	TAZ
<u>1772</u>	AF064090	0.00309 6	0.00434 2	0.00620 6	0.30301 3	TNFSF14
<u>1773</u>	U47634	0.00309 6	0.00434 2	0.0057	0.27820 5	TUBB4

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<u>1774</u>	L27071	0.00309 6	0.00434 2	0.00073 2	-0.39906	TXK
<u>1775</u>	D78514	0.00309 6	0.00434 2	0.00068 1	-0.2599	UBE2G1
<u>1776</u>	AF085807	0.00309 6	0.00434 2	0.00580 1	0.12445 7	UPK1A
<u>1777</u>	U66561	0.00309 6	0.00434 2	0.00254 2	0.44804 4	ZNF184
<u>1778</u>	X78925	0.01362 2	0.00434 2	0.00189 8	0.35192 9	ZNF267
<u>1779</u>	HG2510- HT2606	0.01362 2	0.00434 2	0.00701 6	0.17949 9	
<u>1780</u>	W27419	0.00309 6	0.00434 2	0.00632 5	0.34178 7	
<u>1781</u>	AF054589	0.00309 6	0.00434 2	0.03056 8	-0.50762	
<u>1782</u>	H98552	0.00309 6	0.00434 2	0.01718 5	-0.1057	
<u>1783</u>	AI056697	0.00309 6	0.00434 2	0.00032 9	-0.20147	
<u>1784</u>	X00351	0.00309 6	0.00520 7	0.00150 6	-0.12928	ACTB
<u>1785</u>	AF006082	0.00309 6	0.00520 7	0.00279 7	-0.34587	ACTR2
<u>1786</u>	Y09443	0.00309 6	0.00520 7	0.00228 6	-0.17646	AGPS
<u>1787</u>	U22961	0.00309 6	0.00520 7	0.00309 2	0.14793 2	ALB
<u>1788</u>	AF002163	0.00309 6	0.00520 7	0.00244 7	-0.37588	AP3D1
<u>1789</u>	D87461	0.00309 6	0.00520 7	0.00480 9	-0.26338	BCL2L2
<u>1790</u>	AF013759	0.00309 6	0.00520 7	0.00494 6	-0.18574	CALU
<u>1791</u>	L22005	0.00309 6	0.00520 7	0.00644 2	0.13186 9	CDC34
<u>1792</u>	AL109689	0.00309 6	0.00520 7	0.01329 1	-0.24945	CGI-142
<u>1793</u>	U91543	0.00309 6	0.00520 7	0.01414 3	-0.25258	CHD3
<u>1794</u>	X82153	0.00309 6	0.00520 7	0.01388 2	-0.31742	CTSK
<u>1795</u>	AJ001687	0.00309 6	0.00520 7	0.00022 4	-0.64837	D12S2489E
<u>1796</u>	M13149	0.00309 6	0.00520 7	0.00871 7	-0.13824	HRG
<u>1797</u>	Y10313	0.00309 6	0.00520 7	0.00684 6	0.46476 9	IFRD1
<u>1798</u>	D63485	0.00309 6	0.00520 7	0.00098 5	-0.31599	IKKE
<u>1799</u>	D87077	0.00309 6	0.00520 7	0.04307 2	-0.21138	KIAA0240
<u>1800</u>	AB007864	0.00309 6	0.00520 7	0.00156 9	0.25667 2	KIAA0404

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<u>1801</u>	X75346	0.00309 6	0.00520 7	0.00184 1	0.33169 9	MAPKAPK2
<u>1802</u>	L07648	0.00309 6	0.00520 7	0.01059 4	0.22681 7	MXI1
<u>1803</u>	AB028993	0.00309 6	0.00520 7	0.0247	0.13321 6	NLGN1
<u>1804</u>	D45333	0.00309 6	0.00520 7	0.00210 4	0.30245 4	PFDN1
<u>1805</u>	M65254	0.00309 6	0.00520 7	0.00261 9	0.26289 7	PPP2R1B
<u>1806</u>	M86852	0.00309 6	0.00520 7	0.00427 4	0.17225 1	PXMP3
<u>1807</u>	X97795	0.00309 6	0.00520 7	0.02113 1	-0.18349	RAD54L
<u>1808</u>	U14970	0.00309 6	0.00520 7	0.00189 4	-0.1353	RPS5
<u>1809</u>	X74570	0.00309 6	0.00520 7	0.00345	0.21004 9	SIAT4C
<u>1810</u>	X98248	0.00309 6	0.00520 7	0.01040 3	-0.50617	SORT1
<u>1811</u>	U17714	0.00309 6	0.00520 7	0.00208 1	-0.19372	ST13
<u>1812</u>	W28869	0.00309 6	0.00520 7	0.00136 9	-0.38498	TEGT
<u>1813</u>	M12125	0.00309 6	0.00520 7	0.00017 8	-0.09929	TPM2
<u>1814</u>	L27071	0.00309 6	0.00520 7	0.00383 4	-0.36074	TXK
<u>1815</u>	M60614	0.00309 6	0.00520 7	0.00175 7	-0.25283	WIT-1
<u>1816</u>	HG4074- HT4344	0.00309 6	0.00520 7	0.00417 5	0.58904 8	
<u>1817</u>	AL031846	0.00309 6	0.00520 7	0.00401 2	-0.42132	
<u>1818</u>	HG1980- HT2023	0.00309 6	0.00520 7	0.00231 4	0.71123 4	
<u>1819</u>	AF022853	0.04767 8	0.00668 3	0.00205 6	-0.30792	ABCC1
<u>1820</u>	X02994	0.04767 8	0.00668 3	0.03659 8	-0.12393	ADA
<u>1821</u>	D25304	0.04767 8	0.00668 3	0.00225 8	-0.44746	ARHGEF6
<u>1822</u>	M23115	0.04767 8	0.00668 3	0.01651 8	-0.1243	ATP2A2
<u>1823</u>	U87408	0.04767 8	0.00668 3	0.00862 8	-0.33961	B1
<u>1824</u>	AA135683	0.04767 8	0.00668 3	0.01004 5	0.6329	BASP1
<u>1825</u>	M22491	0.04767 8	0.00668 3	0.02014 1	-0.10386	BMP3
<u>1826</u>	M28170	0.04767 8	0.00668 3	0.01430 3	0.28009 3	CD19
<u>1827</u>	M16336	0.04767 8	0.00668 3	0.01175 5	-0.19993	CD2

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<u>1828</u>	U37022	0.04767 8	0.00668 3	0.02813 5	-0.06885	CDK4
<u>1829</u>	U66469	0.04767 8	0.00668 3	0.00412 3	0.61689 6	CGR19
<u>1830</u>	A1037867	0.04767 8	0.00668 3	0.00963 4	-0.11973	CKTSF1B1
<u>1831</u>	J03071	0.04767 8	0.00668 3	0.01115 3	-0.23776	CSH2
<u>1832</u>	M55265	0.04767 8	0.00668 3	0.01278	-0.1479	CSNK2A1
<u>1833</u>	M33317	0.04767 8	0.00668 3	0.01483 2	-0.17753	CYP2A7
<u>1834</u>	U37143	0.01362 2	0.00668 3	0.00190 8	0.17113 8	CYP2J2
<u>1835</u>	AL049942	0.01362 2	0.00668 3	0.00076	-0.20245	DKFZP564F1422
<u>1836</u>	AL050015	0.01362 2	0.00668 3	0.00852 4	-0.13959	DKFZP564O243
<u>1837</u>	L35594	0.01362 2	0.00668 3	0.00280 6	0.21698 5	ENPP2
<u>1838</u>	J03796	0.04767 8	0.00668 3	0.00259 6	-0.28198	EPB41
<u>1839</u>	AC002398	0.01362 2	0.00668 3	0.00322 6	-0.27062	F25965
<u>1840</u>	X15376	0.01362 2	0.00668 3	0.01438 8	-0.15607	GABRG2
<u>1841</u>	M90656	0.04767 8	0.00668 3	0.00696 1	-0.15968	GCLC
<u>1842</u>	AF062006	0.01362 2	0.00668 3	0.00144 2	0.20011 7	GPR49
<u>1843</u>	X61755	0.01362 2	0.00668 3	0.00049 1	-0.19331	HOXC5
<u>1844</u>	D21851	0.04767 8	0.00668 3	0.01791 5	0.15392 7	KIAA0028
<u>1845</u>	AB007976	0.04767 8	0.00668 3	0.03242 7	0.22887 3	KIAA0507
<u>1846</u>	A1871396	0.04767 8	0.00668 3	0.00195 7	-0.48312	KIAA0557
<u>1847</u>	AB020660	0.04767 8	0.00668 3	0.00185 8	-0.27616	KIAA0853
<u>1848</u>	X93595	0.04767 8	0.00668 3	0.02621 4	0.24506 4	KIR3DL2
<u>1849</u>	AB002405	0.04767 8	0.00668 3	0.00368 1	-0.19481	LAK-4P
<u>1850</u>	X07228	0.04767 8	0.00668 3	0.04645 8	0.11348 4	LIPC
<u>1851</u>	U50529	0.04767 8	0.00668 3	0.00197 7	0.31049 9	LOC88523
<u>1852</u>	AF040963	0.04767 8	0.00668 3	0.01262 9	0.14873 9	MAD4
<u>1853</u>	U59423	0.04767 8	0.00668 3	0.01126	-0.1341	MADH1
<u>1854</u>	U85430	0.01362 2	0.00668 3	0.00022 4	-0.41454	NFATC3

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<u>1855</u>	X80878	0.04767 8	0.00668 3	0.01002 1	-0.16096	NFRKB
<u>1856</u>	AF005043	0.01362 2	0.00668 3	0.00078	-0.15296	PARG
<u>1857</u>	D49818	0.04767 8	0.00668 3	0.02197 6	-0.10631	PFKFB4
<u>1858</u>	M28393	0.01362 2	0.00668 3	0.00324 1	-0.16419	PRF1
<u>1859</u>	Y00062	0.04767 8	0.00668 3	0.01186 8	-0.2415	PTPRC
<u>1860</u>	L07758	0.04767 8	0.00668 3	0.00894 3	0.20188 3	PWP1
<u>1861</u>	U57094	0.04767 8	0.00668 3	0.01494 4	-0.31108	RAB27A
<u>1862</u>	M35416	0.01362 2	0.00668 3	0.00278 9	-0.41233	RALB
<u>1863</u>	X75042	0.04767 8	0.00668 3	0.00361 4	0.65916 6	REL
<u>1864</u>	AF038250	0.04767 8	0.00668 3	0.00419 8	0.39517 1	SFRS3
<u>1865</u>	L27213	0.01362 2	0.00668 3	0.00101 4	-0.13065	SLC4A3
<u>1866</u>	Y09568	0.04767 8	0.00668 3	0.00579 9	-0.3407	SNAP23
<u>1867</u>	AA205857	0.01362 2	0.00668 3	0.00048	0.27495	SNRPD3
<u>1868</u>	U07794	0.04767 8	0.00668 3	0.00763 2	-0.20733	TXK
<u>1869</u>	J05428	0.01362 2	0.00668 3	0.00573	-0.08342	UGT2B7
<u>1870</u>	U09848	0.04767 8	0.00668 3	0.01153 8	-0.26846	ZNF36
<u>1871</u>	J00287	0.04767 8	0.00668 3	0.00095 3	-0.28381	
<u>1872</u>	AB007882	0.01362 2	0.00936 9	0.00603 4	-0.17275	ADCY6
<u>1873</u>	AF072810	0.01362 2	0.00936 9	0.01613 7	-0.32509	BAZ1B
<u>1874</u>	AB004066	0.01362 2	0.00936 9	0.00789	0.49445 5	BHLHB2
<u>1875</u>	U37547	0.01362 2	0.00936 9	0.00478	0.54459 5	BIRC2
<u>1876</u>	AB024704	0.01362 2	0.00936 9	0.01089 3	-0.11914	C20orf1
<u>1877</u>	AC004084	0.01362 2	0.00936 9	0.00549 1	-0.17437	CAPRI
<u>1878</u>	L12691	0.01362 2	0.00936 9	0.01829 1	-0.18848	DEFA3
<u>1879</u>	L19161	0.01362 2	0.00936 9	0.00164 5	-0.27253	EIF2S3
<u>1880</u>	M82882	0.01362 2	0.00936 9	0.00396 6	0.47825 6	ELF1
<u>1881</u>	X81625	0.01362 2	0.00936 9	0.00391 8	0.76254 4	ETF1

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<u>1882</u>	M15059	0.01362 2	0.00936 9	0.03510 6	0.31324 7	FCER2
<u>1883</u>	AA284298	0.01362 2	0.00936 9	0.02874 5	-0.12535	FLJ22269
<u>1884</u>	U13044	0.01362 2	0.00936 9	0.01798 6	-0.32813	GABPA
<u>1885</u>	Z12173	0.01362 2	0.00936 9	0.00129 7	-0.32703	GNS
<u>1886</u>	U06631	0.01362 2	0.00936 9	0.00350 6	-0.37935	H326
<u>1887</u>	X75315	0.01362 2	0.00936 9	0.00295 9	1.06191	HSRNASEB
<u>1888</u>	AF064084	0.01362 2	0.00936 9	0.01792 7	-0.10308	ICMT
<u>1889</u>	AB002330	0.01362 2	0.00936 9	0.04851 2	-0.09076	KIAA0332
<u>1890</u>	AB014569	0.01362 2	0.00936 9	0.01001 1	0.70957 2	KIAA0669
<u>1891</u>	AI970189	0.01362 2	0.00936 9	0.00177 8	0.56980 1	KIAA0997
<u>1892</u>	AB028960	0.01362 2	0.00936 9	0.00182 5	-0.15403	KIAA1037
<u>1893</u>	AJ005273	0.01362 2	0.00936 9	0.00144 9	0.37927 7	KIN
<u>1894</u>	L00352	0.01362 2	0.00936 9	0.00423 1	0.55446 5	LDLR
<u>1895</u>	X54304	0.01362 2	0.00936 9	0.00086 3	-0.19567	MLCB
<u>1896</u>	AI693193	0.01362 2	0.00936 9	0.02397 8	-0.25831	MTX1
<u>1897</u>	AF047487	0.01362 2	0.00936 9	0.00131 2	-0.33746	NCK2
<u>1898</u>	AF037448	0.01362 2	0.00936 9	0.00743	0.20410 6	NSAP1
<u>1899</u>	AF000152	0.01362 2	0.00936 9	0.02521 6	-0.34592	OS4
<u>1900</u>	U02882	0.01362 2	0.00936 9	0.01753 6	0.89232 1	PDE4D
<u>1901</u>	X89416	0.01362 2	0.00936 9	0.00512 9	-0.1405	PPP5C
<u>1902</u>	U27516	0.01362 2	0.00936 9	0.00416 4	-0.17553	RAD52
<u>1903</u>	D23660	0.01362 2	0.00936 9	0.01215	0.14932 7	RPL4
<u>1904</u>	AB016247	0.01362 2	0.00936 9	0.01987 9	0.41663 4	SC5DL
<u>1905</u>	U44754	0.01362 2	0.00936 9	0.00527 3	0.15839 6	SNAPC1
<u>1906</u>	AI660929	0.01362 2	0.00936 9	0.00069 8	-0.15764	T1A-2
<u>1907</u>	X01060	0.01362 2	0.00936 9	0.00507 9	0.27369	TFRC
<u>1908</u>	J02973	0.01362 2	0.00936 9	0.00682 5	0.83533 8	THBD

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<u>1909</u>	L41690	0.01362 2	0.00936 9	0.02020 9	-0.32814	TRADD
<u>1910</u>	X89066	0.01362 2	0.00936 9	0.00039 6	-0.2226	TRPC1
<u>1911</u>	AB024327	0.01362 2	0.00936 9	0.031	0.26087 5	UNRIP
<u>1912</u>	AF033199	0.01362 2	0.00936 9	0.02842	-0.1806	ZNF204
<u>1913</u>	AL080123	0.01362 2	0.00936 9	0.01844 7	0.21544 5	ZNF23
<u>1914</u>	AB007885	0.01362 2	0.00936 9	0.02580 3	-0.22701	ZNF262
<u>1915</u>	U40462	0.01362 2	0.00936 9	0.00410 1	-0.29722	ZNFN1A1
<u>1916</u>	HG3477- HT3670	0.01362 2	0.00936 9	0.00042	-0.2367	
<u>1917</u>	L42324	0.01362 2	0.00936 9	0.01519 5	0.28304 8	GPR18
<u>1918</u>	AA975427	0.01362 2	0.00936 9	0.00237 7	-0.26992	
<u>1919</u>	AL049957	0.01362 2	0.00936 9	0.00780 9	0.13345 1	
<u>1920</u>	AL022398	0.01362 2	0.00936 9	0.01752 9	-0.48579	
<u>1921</u>	HG2689- HT2785	0.01362 2	0.00936 9	0.02981 8	0.20248 6	
<u>1922</u>	AF034373	0.01362 2	0.01467 9	0.00591	-0.26511	A2LP
<u>1923</u>	X83467	0.01362 2	0.01467 9	0.00611 1	-0.25837	ABCD3
<u>1924</u>	U41766	0.04767 8	0.01467 9	0.01436 3	0.47352 6	ADAM9
<u>1925</u>	D67031	0.01362 2	0.01467 9	0.00782 6	-0.4645	ADD3
<u>1926</u>	U84011	0.01362 2	0.01467 9	0.01299 5	-0.2499	AGL
<u>1927</u>	M74088	0.01362 2	0.01467 9	0.03860 1	-0.16952	APC
<u>1928</u>	U67092	0.04767 8	0.01467 9	0.04738 1	-0.10935	ATM
<u>1929</u>	AI033692	0.04767 8	0.01467 9	0.01005 6	-0.2417	BCRP1
<u>1930</u>	X92106	0.01362 2	0.01467 9	0.00137 7	-0.33994	BLMH
<u>1931</u>	Z22535	0.04767 8	0.01467 9	0.02161 3	-0.09832	BMPR1A
<u>1932</u>	X79067	0.04767 8	0.01467 9	0.0381	0.14954	BRF1
<u>1933</u>	X86098	0.01362 2	0.01467 9	0.00080 7	-0.34829	BS69
<u>1934</u>	U72649	0.04767 8	0.01467 9	0.02915 7	0.22744 4	BTG2
<u>1935</u>	X95592	0.04767 8	0.01467 9	0.01412 7	0.20127 3	C1D

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<u>1936</u>	D78586	0.04767 8	0.01467 9	0.02884 5	-0.05709	CAD
<u>1937</u>	D30742	0.04767 8	0.01467 9	0.02821 5	0.18038 1	CAMK4
<u>1938</u>	AF035582	0.04767 8	0.01467 9	0.00204 2	0.53094 6	CASK
<u>1939</u>	U60521	0.04767 8	0.01467 9	0.00235 3	0.55283 7	CASP9
<u>1940</u>	AL035079	0.01362 2	0.01467 9	0.00063	-0.78567	CAT
<u>1941</u>	AF094481	0.04767 8	0.01467 9	0.02456 9	0.14997 3	CGGBP1
<u>1942</u>	X83378	0.01362 2	0.01467 9	0.02560 3	0.13348 5	CLCN6
<u>1943</u>	AB002332	0.04767 8	0.01467 9	0.00313 6	-0.20009	CLOCK
<u>1944</u>	D13146	0.01362 2	0.01467 9	0.01796 7	-0.13385	CNP
<u>1945</u>	S80864	0.01362 2	0.01467 9	0.01110 6	-0.33164	CYCL
<u>1946</u>	D17530	0.04767 8	0.01467 9	0.00551 9	-0.15234	DBN1
<u>1947</u>	U87947	0.04767 8	0.01467 9	0.01127 9	0.22238 2	EMP3
<u>1948</u>	M60459	0.04767 8	0.01467 9	0.01017 4	-0.10156	EPOR
<u>1949</u>	AB018247	0.01362 2	0.01467 9	0.00034 8	0.42357 7	FE65L2
<u>1950</u>	AB028973	0.01362 2	0.01467 9	0.04645 8	-0.12088	FLJ10883
<u>1951</u>	AL080172	0.04767 8	0.01467 9	0.02693	-0.063	FLJ21919
<u>1952</u>	AF032886	0.04767 8	0.01467 9	0.00981 4	0.23230 7	FOXO3A
<u>1953</u>	U00928	0.04767 8	0.01467 9	0.01307	-0.0915	FUS
<u>1954</u>	M14660	0.04767 8	0.01467 9	0.01103 8	0.73246 2	FUT10
<u>1955</u>	AI935146	0.04767 8	0.01467 9	0.04465 3	0.24626 7	GALNT3
<u>1956</u>	U28811	0.04767 8	0.01467 9	0.00757 2	-0.21558	GLG1
<u>1957</u>	AF001903	0.01362 2	0.01467 9	0.00195 7	-0.28636	HADHSC
<u>1958</u>	Y09306	0.04767 8	0.01467 9	0.04508 3	-0.08024	HIPK3
<u>1959</u>	AL022723	0.04767 8	0.01467 9	0.04102 1	0.16526 7	HLA-G
<u>1960</u>	M80469	0.01362 2	0.01467 9	0.03745 3	-0.12099	HLA-J
<u>1961</u>	M16937	0.01362 2	0.01467 9	0.00226 2	-0.13536	HOXB7
<u>1962</u>	X98307	0.01362 2	0.01467 9	0.01185 2	-0.0908	HSHUR7SEQ

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<u>1963</u>	HG2855- HT2995	0.04767 8	0.01467 9	0.03059 5	0.16813	HSP70
<u>1964</u>	X87949	0.04767 8	0.01467 9	0.02856 9	0.29627 3	HSPA5
<u>1965</u>	W68830	0.01362 2	0.01467 9	0.00797 1	-0.22855	HSPC022
<u>1966</u>	D49410	0.04767 8	0.01467 9	0.04036 9	0.15335 8	HUMIL3RA12
<u>1967</u>	AL049470	0.01362 2	0.01467 9	0.01049 2	0.28368 8	HYPB
<u>1968</u>	Y10659	0.04767 8	0.01467 9	0.02420 5	-0.1217	IL13RA1
<u>1969</u>	X52015	0.04767 8	0.01467 9	0.00663 7	0.41708 1	IL1RN
<u>1970</u>	AF047492	0.04767 8	0.01467 9	0.00255 7	0.25738	IMPG1
<u>1971</u>	U96919	0.01362 2	0.01467 9	0.00322 1	-0.19947	INPP4A
<u>1972</u>	U12897	0.01362 2	0.01467 9	0.00249 6	-0.15016	IPW
<u>1973</u>	S62539	0.01362 2	0.01467 9	0.01298 2	-0.20615	IRS1
<u>1974</u>	AF029778	0.04767 8	0.01467 9	0.01800 6	-0.14486	JAG2
<u>1975</u>	W25934	0.04767 8	0.01467 9	0.01692 5	0.36327 9	JTV1
<u>1976</u>	X56681	0.04767 8	0.01467 9	0.00493 5	0.71366 3	JUND
<u>1977</u>	M64934	0.04767 8	0.01467 9	0.00316 2	-0.1823	KEL
<u>1978</u>	D86975	0.04767 8	0.01467 9	0.04847 5	0.16340 8	KIAA0222
<u>1979</u>	AB020701	0.01362 2	0.01467 9	0.01394 6	0.28308 6	KIAA0894
<u>1980</u>	AB023141	0.04767 8	0.01467 9	0.01732 6	-0.33543	KIAA0924
<u>1981</u>	AB023148	0.01362 2	0.01467 9	0.01621 8	-0.27496	KIAA0931
<u>1982</u>	AB023227	0.04767 8	0.01467 9	0.04354 2	0.31606 3	KIAA1010
<u>1983</u>	AB028963	0.04767 8	0.01467 9	0.03919 4	-0.12296	KIAA1040
<u>1984</u>	AL080188	0.04767 8	0.01467 9	0.01674 5	-0.10387	KIAA1775
<u>1985</u>	AJ224162	0.01362 2	0.01467 9	0.00222 5	-0.24337	LAS
<u>1986</u>	L25931	0.01362 2	0.01467 9	0.00482	-0.2367	LBR
<u>1987</u>	AC004410	0.04767 8	0.01467 9	0.01745 7	0.21009 6	LOC56928
<u>1988</u>	AB009462	0.04767 8	0.01467 9	0.01289 2	0.13167 3	LRP3
<u>1989</u>	AF077820	0.01362 2	0.01467 9	0.00309 5	-0.40005	LRP5

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<u>1990</u>	X59408	0.04767 8	0.01467 9	0.01832 1	-0.3029	MCP
<u>1991</u>	L13773	0.01362 2	0.01467 9	0.00274 1	-0.18297	MLLT2
<u>1992</u>	X82209	0.04767 8	0.01467 9	0.01082 8	0.17856 4	MN1
<u>1993</u>	X96401	0.01362 2	0.01467 9	0.00164 3	0.31716 5	MNT
<u>1994</u>	M30818	0.04767 8	0.01467 9	0.03283 2	0.29268 2	MX2
<u>1995</u>	V00568	0.01362 2	0.01467 9	0.00853 5	-0.58978	MYC
<u>1996</u>	D50692	0.01362 2	0.01467 9	0.04337 4	-0.20783	MYCBP
<u>1997</u>	AB007191	0.01362 2	0.01467 9	0.02202 6	-0.18098	MYCBP
<u>1998</u>	X17576	0.01362 2	0.01467 9	0.00164 1	-0.26027	NCK1
<u>1999</u>	X61498	0.01362 2	0.01467 9	0.00623 4	0.30766 7	NFKB2
<u>2000</u>	AF052093	0.04767 8	0.01467 9	0.00131 8	-0.31976	NJMU-R1
<u>2001</u>	X00737	0.04767 8	0.01467 9	0.03738 5	0.21919 4	NP
<u>2002</u>	U02020	0.04767 8	0.01467 9	0.01486 6	0.65028 6	PBEF
<u>2003</u>	X66362	0.04767 8	0.01467 9	0.00615 9	0.13794 4	PCTK3
<u>2004</u>	AF026086	0.04767 8	0.01467 9	0.00655 5	-0.18222	PEX1
<u>2005</u>	L25441	0.04767 8	0.01467 9	0.01190 7	0.14647 1	PGGT1B
<u>2006</u>	AL021366	0.01362 2	0.01467 9	0.00277 5	0.42521 7	PHF1
<u>2007</u>	D85418	0.01362 2	0.01467 9	0.00444 9	-0.31688	PIGC
<u>2008</u>	D30037	0.04767 8	0.01467 9	0.00157 9	-0.21226	PITPNB
<u>2009</u>	AB006746	0.04767 8	0.01467 9	0.0356	0.18998 6	PLSCR1
<u>2010</u>	AF054182	0.01362 2	0.01467 9	0.00209 8	-0.54761	PMPCB
<u>2011</u>	S87759	0.01362 2	0.01467 9	0.00752 2	0.39052	PPM1A
<u>2012</u>	M13057	0.04767 8	0.01467 9	0.03252 3	-0.19317	PRH1
<u>2013</u>	M64992	0.04767 8	0.01467 9	0.04732 6	0.17869 6	PSMA1
<u>2014</u>	X58288	0.04767 8	0.01467 9	0.00263 3	0.40954 2	PTPRM
<u>2015</u>	AD000092	0.04767 8	0.01467 9	0.02835 9	0.13791 7	RAD23A
<u>2016</u>	U79716	0.01362 2	0.01467 9	0.00340 9	0.19538 9	RELN

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<u>2017</u>	U69198	0.04767 8	0.01467 9	0.04800 1	0.08531 6	RFNG
<u>2018</u>	AF117829	0.04767 8	0.01467 9	0.00366 8	0.37725 1	RIPK2
<u>2019</u>	AF039029	0.04767 8	0.01467 9	0.00214 6	-0.28622	RNUT1
<u>2020</u>	AW021542	0.01362 2	0.01467 9	0.00067 7	-0.29232	SAP18
<u>2021</u>	U64197	0.04767 8	0.01467 9	0.02112 4	0.22047 6	SCYA20
<u>2022</u>	AB023136	0.01362 2	0.01467 9	0.00288	-0.10963	SEC15B
<u>2023</u>	AF055006	0.01362 2	0.01467 9	0.01124 1	0.23895 5	SEC6
<u>2024</u>	Z46606	0.04767 8	0.01467 9	0.00577 8	-0.1566	SMARCA3
<u>2025</u>	L25270	0.04767 8	0.01467 9	0.00240 1	-0.15644	SMCX
<u>2026</u>	M60618	0.01362 2	0.01467 9	0.00631 6	0.23583 8	SP100
<u>2027</u>	AI739308	0.01362 2	0.01467 9	0.00186 1	-0.57419	SRP46
<u>2028</u>	U52960	0.04767 8	0.01467 9	0.02599	0.42908 6	SURB7
<u>2029</u>	D50863	0.01362 2	0.01467 9	0.00658 2	-0.13005	TESK1
<u>2030</u>	D64015	0.01362 2	0.01467 9	0.00758 7	-0.3629	TIAL1
<u>2031</u>	AB001523	0.04767 8	0.01467 9	0.02756 5	0.16483 8	TMEM1
<u>2032</u>	L21715	0.01362 2	0.01467 9	0.00086 2	0.30980 8	TNNI2
<u>2033</u>	AF045583	0.04767 8	0.01467 9	0.04388 7	-0.16757	TULP3
<u>2034</u>	AJ001340	0.01362 2	0.01467 9	0.00239 6	-0.17031	U3-55K
<u>2035</u>	AB015344	0.01362 2	0.01467 9	0.00810 7	-0.31161	UBQLN2
<u>2036</u>	J03824	0.01362 2	0.01467 9	0.00586 4	-0.18849	UROS
<u>2037</u>	AF022789	0.04767 8	0.01467 9	0.00658 2	0.30926 7	USP12
<u>2038</u>	U48801	0.01362 2	0.01467 9	0.00384 9	-0.17743	VEGFB
<u>2039</u>	HG544- HT544	0.04767 8	0.01467 9	0.01054 9	0.45421 8	
<u>2040</u>	S66666	0.01362 2	0.01467 9	0.00336 4	-0.14303	
<u>2041</u>	AI687419	0.04767 8	0.01467 9	0.03939 4	-0.3657	
<u>2042</u>	W28800	0.04767 8	0.01467 9	0.00458 2	0.27083 1	
<u>2043</u>	AL080111	0.01362 2	0.01467 9	0.00137 8	-0.36029	

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<u>2044</u>	AF070536	0.04767 8	0.01467 9	0.00668 5	0.19936 4	
<u>2045</u>	AF070633	0.04767 8	0.01467 9	0.01014 2	-0.1635	
<u>2046</u>	AF054998	0.01362 2	0.01467 9	0.00791 3	-0.21157	
<u>2047</u>	HG3725- HT3981	0.04767 8	0.01467 9	0.02779 2	-0.11953	
<u>2048</u>	HG1614- HT1614	0.01362 2	0.01467 9	0.00699 9	-0.45233	
<u>2049</u>	M22324	0.01362 2	0.01669	0.00998 2	0.28329 3	ANPEP
<u>2050</u>	AC005955	0.01362 2	0.01669	0.00434 6	0.13732 4	CEACAM4
<u>2051</u>	S68134	0.01362 2	0.01669	0.00537 2	1.92718	CREM
<u>2052</u>	S68271	0.01362 2	0.01669	0.00915 4	1.49785	CREM
<u>2053</u>	M24069	0.01362 2	0.01669	0.00302 2	0.24997 1	CSDA
<u>2054</u>	AF000984	0.01362 2	0.01669	0.00429 5	0.46432	DBY
<u>2055</u>	AF055917	0.01362 2	0.01669	0.01543 4	0.10285 5	F2RL3
<u>2056</u>	U27333	0.01362 2	0.01669	0.01266 2	0.13604 7	FUT6
<u>2057</u>	X89887	0.01362 2	0.01669	0.00972 8	0.15282 9	HIRA
<u>2058</u>	L42243	0.01362 2	0.01669	0.00263 8	0.21864 4	IFNAR2
<u>2059</u>	AI950382	0.01362 2	0.01669	0.00744	0.60163 1	KIAA0585
<u>2060</u>	AI950382	0.01362 2	0.01669	0.00212 6	0.51973 5	KIAA0585
<u>2061</u>	U17760	0.01362 2	0.01669	0.04439 2	0.43113 1	LAMB3
<u>2062</u>	L48692	0.01362 2	0.01669	0.04123 3	0.63409	LOC56902
<u>2063</u>	X94232	0.01362 2	0.01669	0.01640 2	0.32669 4	MAPRE2
<u>2064</u>	AA037278	0.01362 2	0.01669	0.01607	0.11941 1	MGC10882
<u>2065</u>	L13740	0.01362 2	0.01669	0.00779 5	0.35568 8	NR4A1
<u>2066</u>	U12767	0.01362 2	0.01669	0.01164 8	1.30268	NR4A3
<u>2067</u>	D78579	0.01362 2	0.01669	0.00589 6	1.11766	NR4A3
<u>2068</u>	X17042	0.01362 2	0.01669	0.01559 4	0.23979 6	PRG1
<u>2069</u>	U48296	0.01362 2	0.01669	0.00312 4	0.86410 1	PTP4A1
<u>2070</u>	M83221	0.01362 2	0.01669	0.01232 1	0.19295 6	RELB

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<u>2071</u>	AF107463	0.01362 2	0.01669	0.00966 2	0.41925 4	SPF30
<u>2072</u>	L47276	0.01362 2	0.01669	0.00467 3	0.19444 9	TOP2A
<u>2073</u>	X00734	0.01362 2	0.01669	0.01003 9	0.34730 7	TUBB5
<u>2074</u>	X51521	0.01362 2	0.01669	0.01030 3	0.60161	VIL2
<u>2075</u>	S54641	0.01362 2	0.01669	0.00848 3	0.18320 7	ZNF124
<u>2076</u>	M91029	0.01362 2	0.02275 9	0.01068 6	0.45061 2	AMPD2
<u>2077</u>	AB021638	0.13618 9	0.02275 9	0.02488 1	-0.1126	APBA3
<u>2078</u>	AL120559	0.01362 2	0.02275 9	0.00450 5	0.57791 5	ARPP-19
<u>2079</u>	AF039656	0.01362 2	0.02275 9	0.00699 1	0.68481	BASP1
<u>2080</u>	AB020623	0.04767 8	0.02275 9	0.00969 6	0.41882 6	BCAS2
<u>2081</u>	X60201	0.01362 2	0.02275 9	0.01175 8	-0.1576	BDNF
<u>2082</u>	U56637	0.04767 8	0.02275 9	0.00889 9	-0.28102	CAPZA1
<u>2083</u>	AW043690	0.04767 8	0.02275 9	0.03197 1	0.13486 2	CCK
<u>2084</u>	D13627	0.04767 8	0.02275 9	0.01929 8	0.20391 3	CCT8
<u>2085</u>	U56998	0.01362 2	0.02275 9	0.02440 3	0.44254 5	CNK
<u>2086</u>	U71267	0.04767 8	0.02275 9	0.00723 3	-0.13426	CNOT4
<u>2087</u>	F27891	0.04767 8	0.02275 9	0.02847	0.11951 4	COX6A2
<u>2088</u>	U78524	0.01362 2	0.02275 9	0.00255 4	0.35303 4	DDXBP1
<u>2089</u>	AF043733	0.04767 8	0.02275 9	0.00564 5	0.22771	DEDD
<u>2090</u>	X64229	0.01362 2	0.02275 9	0.01303 3	-0.20244	DEK
<u>2091</u>	AL050284	0.04767 8	0.02275 9	0.00281 9	0.23224 4	DKFZP586M101 9
<u>2092</u>	L05147	0.01362 2	0.02275 9	0.02116 8	0.11175 2	DUSP3
<u>2093</u>	U15642	0.01362 2	0.02275 9	0.01333 9	0.47442 1	E2F5
<u>2094</u>	U31556	0.04767 8	0.02275 9	0.01130 3	0.33587 1	E2F5
<u>2095</u>	AC004262	0.04767 8	0.02275 9	0.00496 8	-0.25642	EMR2
<u>2096</u>	AA181196	0.04767 8	0.02275 9	0.00945 9	-0.10534	FLJ11712
<u>2097</u>	U74612	0.01362 2	0.02275 9	0.01480 2	-0.18783	FOXMI

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<u>2098</u>	W28281	0.01362 2	0.02275 9	0.01104 2	0.81374 2	GABARAPL1
<u>2099</u>	AI183417	0.01362 2	0.02275 9	0.01101 6	0.11797 9	GABPB1
<u>2100</u>	L13720	0.01362 2	0.02275 9	0.01447 1	-0.1601	GAS6
<u>2101</u>	X15722	0.01362 2	0.02275 9	0.02945 1	-0.19175	GSR
<u>2102</u>	Y07595	0.01362 2	0.02275 9	0.00311 3	-0.20996	GTF2H4
<u>2103</u>	L43821	0.04767 8	0.02275 9	0.00586 3	-0.20401	HEF1
<u>2104</u>	L10379	0.01362 2	0.02275 9	0.02006	-0.15961	HRIHFB2206
<u>2105</u>	X99209	0.01362 2	0.02275 9	0.02133 3	-0.14942	HRMT1L1
<u>2106</u>	X77956	0.01362 2	0.02275 9	0.00959 8	0.59103 1	ID1
<u>2107</u>	AL021707	0.01362 2	0.02275 9	0.00416 1	1.79061	KIAA0063
<u>2108</u>	AB007896	0.01362 2	0.02275 9	0.00627 3	-0.41247	KIAA0436
<u>2109</u>	AB014528	0.04767 8	0.02275 9	0.00199 2	-0.31837	KIAA0628
<u>2110</u>	AB014607	0.01362 2	0.02275 9	0.00076 4	-0.15753	KIAA0707
<u>2111</u>	AB018290	0.01362 2	0.02275 9	0.03450 6	-0.28703	KIAA0747
<u>2112</u>	AB018337	0.01362 2	0.02275 9	0.00846 6	-0.41118	KIAA0794
<u>2113</u>	AB023161	0.01362 2	0.02275 9	0.01846 1	-0.15095	KIAA0944
<u>2114</u>	AB023202	0.01362 2	0.02275 9	0.00587 9	-0.19156	KIAA0985
<u>2115</u>	U80743	0.01362 2	0.02275 9	0.00054 4	-0.30322	KIAA1498
<u>2116</u>	X13794	0.04767 8	0.02275 9	0.01867 1	-0.12764	LDHB
<u>2117</u>	Z34975	0.01362 2	0.02275 9	0.01225 6	-0.29089	LDLC
<u>2118</u>	AI341656	0.04767 8	0.02275 9	0.02148 2	-0.26002	LIM
<u>2119</u>	X87342	0.01362 2	0.02275 9	0.00665 2	-0.23382	LLGL2
<u>2120</u>	U29671	0.04767 8	0.02275 9	0.00113 3	-0.2617	MAP3K1
<u>2121</u>	Z14138	0.01362 2	0.02275 9	0.00408	0.81232	MAP3K8
<u>2122</u>	AI743606	0.01362 2	0.02275 9	0.00269	-0.19764	MEL
<u>2123</u>	AF052183	0.01362 2	0.02275 9	0.00215 1	-0.19631	MGC2722
<u>2124</u>	AL050356	0.01362 2	0.02275 9	0.00274 3	-0.42417	MINPP1

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<u>2125</u>	AF041081	0.01362 2	0.02275 9	0.01928 2	-0.21627	MN7
<u>2126</u>	U59302	0.01362 2	0.02275 9	0.00385 9	0.28017 5	NCOA1
<u>2127</u>	W28360	0.01362 2	0.02275 9	0.01663 3	0.27205 7	NCUBE1
<u>2128</u>	U97198	0.01362 2	0.02275 9	0.00135 2	-0.20163	NLP_1
<u>2129</u>	AA194159	0.01362 2	0.02275 9	0.00461 4	-0.40044	PEX10
<u>2130</u>	U38964	0.01362 2	0.02275 9	0.00491 2	-0.23793	PMS2L8
<u>2131</u>	D38498	0.01362 2	0.02275 9	0.00396 5	-0.58306	PMS2L9
<u>2132</u>	AA996066	0.01362 2	0.02275 9	0.00351 4	-0.21994	PMS2L9
<u>2133</u>	AB029028	0.01362 2	0.02275 9	0.02775 3	-0.29778	RAP140
<u>2134</u>	AA402524	0.04767 8	0.02275 9	0.00535 9	-0.11564	RBM9
<u>2135</u>	U79745	0.01362 2	0.02275 9	0.00409	0.77762 9	SLC16A6
<u>2136</u>	X98332	0.01362 2	0.02275 9	0.00228 2	-0.20078	SLC22A1
<u>2137</u>	D42045	0.01362 2	0.02275 9	0.00686 7	-0.19726	SNM1
<u>2138</u>	M76231	0.01362 2	0.02275 9	0.00994 2	0.13899	SPR
<u>2139</u>	U76366	0.01362 2	0.02275 9	0.01541 6	-0.09378	TCOF1
<u>2140</u>	U09087	0.01362 2	0.02275 9	0.00607	-0.26017	TMPO
<u>2141</u>	AF049140	0.04767 8	0.02275 9	0.01111 5	-0.21894	UBE2V2
<u>2142</u>	AF038962	0.04767 8	0.02275 9	0.00721 9	-0.44337	VDAC3
<u>2143</u>	D84145	0.01362 2	0.02275 9	0.00292 3	0.57415 5	WS-3
<u>2144</u>	Y09723	0.04767 8	0.02275 9	0.00129 2	0.23414 9	ZNF151
<u>2145</u>	AL049991	0.01362 2	0.02275 9	0.00709 4	0.24523 7	
<u>2146</u>	AL050148	0.01362 2	0.02275 9	0.01312 8	-0.26398	
<u>2147</u>	AI014538	0.01362 2	0.02275 9	0.00350 7	-0.15278	
<u>2148</u>	AI732885	0.04767 8	0.02275 9	0.04388 6	-0.10293	
<u>2149</u>	U14573	0.01362 2	0.02275 9	0.04259	-0.11614	
<u>2150</u>	U82987	0.01362 2	0.02460 6	0.00343	-0.17272	BBC3
<u>2151</u>	L12168	0.01362 2	0.02460 6	0.00794 4	-0.22028	CAP

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<u>2152</u>	V00571	0.01362 2	0.02460 6	0.00587 3	0.13201 5	CRH
<u>2153</u>	AL022398	0.01362 2	0.02460 6	0.01500 5	-0.44535	DJ434O14.3
<u>2154</u>	AL080081	0.01362 2	0.02460 6	0.00765 9	0.54883 6	DNAJB9
<u>2155</u>	X85116	0.01362 2	0.02460 6	0.03953 1	-0.24601	EPB72
<u>2156</u>	AJ007669	0.01362 2	0.02460 6	0.01940 4	-0.23162	FANCG
<u>2157</u>	AW024285	0.01362 2	0.02460 6	0.00704 9	0.31156 2	FLJ12443
<u>2158</u>	W27666	0.01362 2	0.02460 6	0.00954 4	-0.25685	FLJ14393
<u>2159</u>	AA908993	0.01362 2	0.02460 6	0.01535 6	-0.12684	FLJ14393
<u>2160</u>	U90917	0.01362 2	0.02460 6	0.01660 2	-0.23386	FOXMI
<u>2161</u>	AF017445	0.01362 2	0.02460 6	0.02552 5	-0.33517	FPGT
<u>2162</u>	AJ238764	0.01362 2	0.02460 6	0.03066 7	0.19776 3	GNE
<u>2163</u>	J04501	0.01362 2	0.02460 6	0.00782 1	-0.23523	GYS1
<u>2164</u>	X56841	0.01362 2	0.02460 6	0.02260 5	-0.23469	HLA-E
<u>2165</u>	M63438	0.01362 2	0.02460 6	0.00538 9	-0.75873	IGKC
<u>2166</u>	S66213	0.01362 2	0.02460 6	0.01136 2	-0.09802	ITGA6
<u>2167</u>	AB007870	0.01362 2	0.02460 6	0.00285 5	0.65721 3	KIAA0410
<u>2168</u>	N29665	0.01362 2	0.02460 6	0.00830 1	-0.49779	KIAA0618
<u>2169</u>	AB018353	0.01362 2	0.02460 6	0.03386 4	-0.3542	KIAA0810
<u>2170</u>	D10522	0.01362 2	0.02460 6	0.02846 4	0.22227	MACS
<u>2171</u>	AF004709	0.01362 2	0.02460 6	0.01811 8	-0.09931	MAPK13
<u>2172</u>	W28275	0.01362 2	0.02460 6	0.00587 1	-0.27591	MGC11061
<u>2173</u>	AF087020	0.01362 2	0.02460 6	0.03206 4	-0.13544	MPZL1
<u>2174</u>	U61981	0.01362 2	0.02460 6	0.01206 9	-0.20932	MSH3
<u>2175</u>	U90942	0.01362 2	0.02460 6	0.00400 2	0.17902 9	MYO5A
<u>2176</u>	D50370	0.01362 2	0.02460 6	0.00832 7	-0.11492	NAPIL3
<u>2177</u>	U91512	0.01362 2	0.02460 6	0.00493 9	0.54988	NINJ1
<u>2178</u>	AF069987	0.01362 2	0.02460 6	0.00733 6	-0.16953	NIT1

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<u>2179</u>	U37689	0.01362 2	0.02460 6	0.00709 7	-0.17369	POLR2H
<u>2180</u>	L19067	0.01362 2	0.02460 6	0.00640 6	0.14851 7	RELA
<u>2181</u>	X13482	0.01362 2	0.02460 6	0.01687 3	0.24199 8	SNRPA1
<u>2182</u>	D16827	0.01362 2	0.02460 6	0.00431 4	-0.16954	SSTR5
<u>2183</u>	AB011420	0.01362 2	0.02460 6	0.03079 1	0.17166 9	STK17A
<u>2184</u>	L39060	0.01362 2	0.02460 6	0.02679 7	-0.24028	TAF1A
<u>2185</u>	AB011169	0.01362 2	0.02460 6	0.00401 7	-0.24355	TEB4
<u>2186</u>	U69108	0.01362 2	0.02460 6	0.02447 2	-0.17595	TRAF5
<u>2187</u>	AB011004	0.01362 2	0.02460 6	0.00265	1.03158	UAP1
<u>2188</u>	AB014584	0.01362 2	0.02460 6	0.02852 5	-0.1337	UBE4B
<u>2189</u>	HG3914- HT4184	0.01362 2	0.02460 6	0.02585 4	-0.12454	
<u>2190</u>	Z32860	0.01362 2	0.02460 6	0.00203 7	-0.11041	
<u>2191</u>	U25849	0.01362 2	0.02460 6	0.00632	-0.43498	
<u>2192</u>	AF052100	0.01362 2	0.02460 6	0.00671 8	-0.2297	
<u>2193</u>	X59268	0.01362 2	0.02460 6	0.00358 6	0.47942 3	GTF2B
<u>2194</u>	AF007142	0.01362 2	0.02460 6	0.01864	-0.34584	
<u>2195</u>	AI312646	0.01362 2	0.02460 6	0.02759 6	-0.14991	
<u>2196</u>	AL022318	0.04767 8	0.02819 2	0.04935 5	-0.11704	APOBEC1L
<u>2197</u>	M30704	0.04767 8	0.02819 2	0.00926	0.27966 8	AREG
<u>2198</u>	AF001307	0.04767 8	0.02819 2	0.01810 9	-0.12594	ARNT
<u>2199</u>	AB020680	0.04767 8	0.02819 2	0.00700 9	0.22725 6	BAG5
<u>2200</u>	AF018631	0.04767 8	0.02819 2	0.00834 4	-0.13689	BTD
<u>2201</u>	D64110	0.04767 8	0.02819 2	0.02280 9	0.39841 2	BTG3
<u>2202</u>	Z11697	0.04767 8	0.02819 2	0.02413 1	0.75049 2	CD83
<u>2203</u>	M31516	0.04767 8	0.02819 2	0.02156 2	0.51706 8	DAF
<u>2204</u>	AF000982	0.04767 8	0.02819 2	0.02535 7	0.29808	DDX3
<u>2205</u>	L77566	0.04767 8	0.02819 2	0.01243	0.17895 7	DGSI

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<u>2206</u>	AL096725	0.04767 8	0.02819 2	0.00738 1	0.43668 8	DKFZP434B103
<u>2207</u>	AL080201	0.04767 8	0.02819 2	0.04482 9	-0.11576	DKFZP434F162
<u>2208</u>	AL050286	0.04767 8	0.02819 2	0.00426 7	-0.22397	DKFZP586A011
<u>2209</u>	Y13350	0.04767 8	0.02819 2	0.01556 2	0.13700 2	DNAJA2
<u>2210</u>	AJ223333	0.04767 8	0.02819 2	0.01383 6	-0.17437	DNMT2
<u>2211</u>	L34075	0.04767 8	0.02819 2	0.01384 8	-0.25236	FRAP1
<u>2212</u>	D31766	0.04767 8	0.02819 2	0.02928 7	-0.09623	GNPI
<u>2213</u>	Z80776	0.04767 8	0.02819 2	0.00203 4	0.14349 1	H2AFG
<u>2214</u>	K03183	0.04767 8	0.02819 2	0.04029 8	0.16330 6	HUMCGBBA3
<u>2215</u>	X57025	0.04767 8	0.02819 2	0.00913 5	0.43739 4	IGF1
<u>2216</u>	X56681	0.04767 8	0.02819 2	0.01288 5	0.42318 1	JUND
<u>2217</u>	AB007916	0.04767 8	0.02819 2	0.00772	-0.45744	KIAA0447
<u>2218</u>	AI672098	0.04767 8	0.02819 2	0.01433 1	0.16064 9	KIAA0934
<u>2219</u>	AB029020	0.04767 8	0.02819 2	0.03528 5	-0.3101	KIAA1097
<u>2220</u>	W27233	0.04767 8	0.02819 2	0.01991 8	-0.24802	KIDINS220
<u>2221</u>	AL049341	0.04767 8	0.02819 2	0.00194 3	-0.3086	LOC57209
<u>2222</u>	AL049422	0.04767 8	0.02819 2	0.02882 3	0.26412 9	LOC84549
<u>2223</u>	AF010193	0.04767 8	0.02819 2	0.00372 9	0.92722 5	MADH7
<u>2224</u>	AF007134	0.04767 8	0.02819 2	0.00915 1	-0.1209	MAPK8IP1
<u>2225</u>	L04731	0.04767 8	0.02819 2	0.02559 9	-0.07236	MLL
<u>2226</u>	AB014547	0.04767 8	0.02819 2	0.02378 7	-0.15831	MTMR4
<u>2227</u>	U91616	0.04767 8	0.02819 2	0.01868 1	0.37793 1	NFKBIE
<u>2228</u>	X75918	0.04767 8	0.02819 2	0.01971 3	1.21948	NR4A2
<u>2229</u>	AL049842	0.04767 8	0.02819 2	0.02269 8	0.20125 8	NUFIP1
<u>2230</u>	U57843	0.04767 8	0.02819 2	0.01179 6	-0.13969	PIK3CD
<u>2231</u>	S76965	0.04767 8	0.02819 2	0.01241 3	0.42620 8	PKIA
<u>2232</u>	AL023553	0.04767 8	0.02819 2	0.00321	-0.15608	PMM1

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<u>2233</u>	M93425	0.04767 8	0.02819 2	0.01989 9	-0.36854	PTPN12
<u>2234</u>	AF044968	0.04767 8	0.02819 2	0.00688 7	0.12189 8	PVRL2
<u>2235</u>	M28211	0.04767 8	0.02819 2	0.05006 5	-0.08518	RAB4
<u>2236</u>	AF083255	0.04767 8	0.02819 2	0.02124 8	-0.27368	RNAHP
<u>2237</u>	U04897	0.04767 8	0.02819 2	0.01389 3	0.27816 7	RORA
<u>2238</u>	AL031228	0.04767 8	0.02819 2	0.02049 1	-0.22382	SACM2L
<u>2239</u>	Y08262	0.04767 8	0.02819 2	0.00818 4	-0.34195	SCA2
<u>2240</u>	AF000652	0.04767 8	0.02819 2	0.00153 3	0.41521 8	SDCBP
<u>2241</u>	D31891	0.04767 8	0.02819 2	0.00536	-0.18144	SETDB1
<u>2242</u>	X66079	0.04767 8	0.02819 2	0.00870 7	0.12964 2	SPIB
<u>2243</u>	Z96932	0.04767 8	0.02819 2	0.01362 2	-0.14003	SSNA1
<u>2244</u>	D43642	0.04767 8	0.02819 2	0.01530 2	-0.26409	TCFL1
<u>2245</u>	D50919	0.04767 8	0.02819 2	0.01620 7	-0.23972	TRIM14
<u>2246</u>	X01703	0.04767 8	0.02819 2	0.00433 9	0.38609 6	TUBA3
<u>2247</u>	AF022375	0.04767 8	0.02819 2	0.01519 8	0.50360 7	VEGF
<u>2248</u>	AF062346	0.04767 8	0.02819 2	0.01476 3	0.45505 3	ZNF216
<u>2249</u>	J04755	0.04767 8	0.02819 2	0.01444 4	0.30227 4	
<u>2250</u>	AA524802	0.04767 8	0.02819 2	0.03622 6	-0.24775	
<u>2251</u>	AL096749	0.04767 8	0.02819 2	0.01704 1	0.10630 9	
<u>2252</u>	M21259	0.04767 8	0.02819 2	0.02592 7	0.18378	
<u>2253</u>	X61587	0.04767 8	0.03736 4	0.02402 8	0.22278 8	ARHG
<u>2254</u>	J04027	0.04767 8	0.03736 4	0.01991 8	0.33692 7	ATP2B1
<u>2255</u>	W28091	0.04767 8	0.03736 4	0.01693 6	-0.1567	BBS4
<u>2256</u>	U03106	0.04767 8	0.03736 4	0.00406 4	0.91509 6	CDKN1A
<u>2257</u>	AL049924	0.04767 8	0.03736 4	0.00151 7	-0.23208	DKFZP547G1110
<u>2258</u>	L19161	0.04767 8	0.03736 4	0.00657 8	-0.49859	EIF2S3
<u>2259</u>	AF052123	0.13618 9	0.03736 4	0.01352 4	-0.24445	FLJ10814

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<u>2260</u>	AA522530	0.04767 8	0.03736 4	0.03802 1	0.41353 6	FLJ20500
<u>2261</u>	AJ011001	0.04767 8	0.03736 4	0.01643 6	-0.63045	GPR56
<u>2262</u>	U50079	0.04767 8	0.03736 4	0.01317 8	-0.37546	HDAC1
<u>2263</u>	AI796944	0.04767 8	0.03736 4	0.01159 7	0.21639 2	HIS1
<u>2264</u>	S82986	0.04767 8	0.03736 4	0.00644 1	-0.20652	HOXC6
<u>2265</u>	AB011173	0.04767 8	0.03736 4	0.01376	-0.26283	KIAA0601
<u>2266</u>	AB023160	0.04767 8	0.03736 4	0.02946 7	-0.23276	KIAA0943
<u>2267</u>	AJ001685	0.04767 8	0.03736 4	0.01520 8	-0.48906	KLRC3
<u>2268</u>	AJ000673	0.04767 8	0.03736 4	0.00902 1	-0.38103	KLRD1
<u>2269</u>	AB002450	0.04767 8	0.03736 4	0.00339 1	-0.37426	LOC51014
<u>2270</u>	U68385	0.04767 8	0.03736 4	0.00765 1	-0.16327	MEIS3
<u>2271</u>	AI688516	0.04767 8	0.03736 4	0.01785 9	-0.15146	NDUFA2
<u>2272</u>	W28770	0.04767 8	0.03736 4	0.00526 9	-0.16121	NP25
<u>2273</u>	L41827	0.04767 8	0.03736 4	0.01130 8	0.13989 6	NRG1
<u>2274</u>	X84373	0.04767 8	0.03736 4	0.00725	0.77533	NRIP1
<u>2275</u>	M25897	0.04767 8	0.03736 4	0.02574 7	-0.41462	PF4
<u>2276</u>	U50062	0.04767 8	0.03736 4	0.01815 4	0.19401	RIPK1
<u>2277</u>	AJ011785	0.04767 8	0.03736 4	0.01790 7	-0.07616	SIX6
<u>2278</u>	X70683	0.04767 8	0.03736 4	0.0155	-0.10219	SOX4
<u>2279</u>	AL035699	0.04767 8	0.03736 4	0.00656 1	-0.15185	TBPL1
<u>2280</u>	D15050	0.04767 8	0.03736 4	0.01613 3	0.99079 1	TCF8
<u>2281</u>	AF017146	0.04767 8	0.03736 4	0.00297 5	-0.20652	TOP3B
<u>2282</u>	U54996	0.04767 8	0.03736 4	0.00691	-0.17359	ZW10
<u>2283</u>	HG4234-HT	0.04767 8	0.03736 4	0.00325 8	-0.13985	
<u>2284</u>	X04500	0.04767 8	0.05863 4	0.02228	0.85795 2	IL1B

Table IV: Differential Gene Expression in MOG-reactive T-cells- MS vs. Healthy

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<u>SEQ ID NO:</u>	Identifier	Symbol	Name	Function	Fold	Pvalue
	Up regulated				Change	t-test
<u>2285</u>	M35878	IGFBP3	insulin-like growth factor binding protein 3	modulate IGF activity	5.8	0.03
<u>2286</u>	AB002318	KIAA0320	KIAA0320 protein		2.4	0.05
<u>2287</u>	AF024710	VEGF	vascular endothelial growth factor	endothelial cell proliferation	2.3	0.02
<u>2288</u>	AA628946	KHSRP	KH-type splicing regulatory protein	mRNA processing	2.2	0.01
<u>2289</u>	L42374	PPP2R5B	protein phosphatase 2, regulatory subunit B	protein phosphatase	2.1	0.05
<u>2290</u>	U54644	TUB	tubby (mouse) homolog	may be a transcription factor	1.8	0.01
<u>2291</u>	AB023167	KIAA0950	lifeguard	Apoptosis	1.8	0.006
<u>2292</u>	X62654	CD63	CD63 antigen (melanoma 1 antigen)	growth regulation	1.8	0.03
<u>2293</u>	H98552		cDNA DKFZp586I0523		1.8	0.01
<u>2294</u>	AL050395	MOF	member of MYST acetyl transferases	histone acetyl transferases	1.7	0.03
<u>2295</u>	L27213	SLC4A3	solute carrier family 4, anion exchange 3	inorganic anion exchanger	1.7	0.01
<u>2296</u>	AF014837	M6A	putative methyltransferase	Transcription factor	1.6	0.05
<u>2297</u>	AB014537	KIAA0637	KIAA0637 gene product	Apoptosis	1.5	0.003
<u>2298</u>	D13969	ZNF144	zinc finger protein 144 (Mel-18)	DNA-Binding protein	1.5	0.04
<u>2299</u>	AJ012590	H6PD	hexose-6-phosphate dehydrogenase	Oxidoreductase	1.5	0.04
<u>2300</u>	M13995	BCL2	B-cell CLL/lymphoma 2	Apoptosis	1.5	0.03
<u>2301</u>	AI760801		chromosome 19, cosmid R31180		1.5	0.009
<u>2302</u>	AI660963	MAP3K12	mitogen-activated protein 3 kinase 12	Transferase cytoplasmic	1.5	0.02
<u>2303</u>	Down regulated D45248	PSME2	proteasome activator subunit 2 (PA28 beta)	Protein degradation	-1.5	0.04
<u>2304</u>	W28612		ESTs		-1.5	0.02
<u>2305</u>	Z46389	VASP	vasodilator-stimulated phosphoprotein	Signal transduction	-1.6	0.02
<u>2306</u>	AA152202	FLJ14639	hypothetical protein FLJ14639		-1.6	0.02
<u>2307</u>	AF080561	RBM14	RNA binding motif protein 14	RNA binding protein	-1.7	0.03
<u>2308</u>	D50922	KIAA0132	Kelch-like ECH-associated protein 1	ECH-associated protein 1	-1.7	0.03
<u>2309</u>	AF025441	OIP5	Opa-interacting protein 5		-1.8	0.04

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<u>2310</u>	AF080227	EED	embryonic ectoderm development	transcriptional repressor	-1.8	0.04
<u>2311</u>	D87957	RQCD1	required for cell differentiation	sex differentiation	-1.9	0.03
<u>2312</u>	X61498	NFKB2	nuclear factor of kappa light polypeptide Bcells	expression of inflammatory genes	-1.9	0.05
<u>2313</u>	X52425	IL4R	interleukin 4 receptor	receptor signalling protein	-2	0.04
<u>2314</u>	L08069	DNAJA1	DnaJ (Hsp40) homolog, subfamily A, member 1	protein folding and transport	-2	0.04
<u>2315</u>	AF071504	STX11	syntaxin 11	protein transport	-2.1	0.03
<u>2316</u>	M11717	HSPA1A	heat shock 70kD protein 1A	heat shock response	-2.2	0.03
<u>2317</u>	M59830	HSPA1B	heat shock 70kD protein 1B	heat shock response	-2.2	0.03
<u>2318</u>	M16441	TNF	Human tumor necrosis factor	Inflammatory response	-2.3	0.05
<u>2319</u>	D89077	SLA	Src-like-adaptor		-2.4	0.05
<u>2320</u>	U77949	CDC6	cell division cycle 6, S. cerevisiae homolog	DNA replication checkpoint	-2.5	0.02
<u>2321</u>	D38549	KIAA0068	KIAA0068 protein		-2.5	0.01
<u>2322</u>	L23959	TFDP1	transcription factor Dp-1	cycle progression G1 to S-phase	-2.5	0.01
<u>2323</u>	L78833	BRCA1	Breast cancer susceptibility gene		-2.7	0.04
<u>2324</u>	M63193	ECGF1	endothelial cell growth factor 1	stimulates angiogenesis	-2.8	0.01
<u>2325</u>	AF035625	STK11	serine/threonine kinase 11	Peutz-Jeghers syndrome	-2.9	0.04
<u>2326</u>	J04130	SCYA4	small inducible cytokine A4	Cell-to-cell signalling	-2.9	0.05
<u>2327</u>	X93086	BLVRA	biliverdin reductase A	biliverdin reductase	-4	0.03

Table V: Differential Gene Expression in Probable MS vs. Healthy

<u>SEQ ID NO:</u>	Identification	TNOM PValue	Info PValue	t-Test PValue	Log Fold Change	Gene Symbol
<u>2328</u>	NM_018049.1	0.00023 3	0.00023 3	2.46E-05	0.43833 7	FLJ10297
<u>2329</u>	NM_005886.1	0.00023 3	0.00023 3	0.00055 3	0.35972	KATNB1
<u>2330</u>	NM_000161.1	0.00023 3	0.00023 3	0.00029 7	-0.48848	GCH1
<u>2331</u>	NM_001539.1	0.00023 3	0.00023 3	0.00014 4	-0.58017	DNAJA1

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<u>2332</u>	AF349571.1	0.00420 2	0.00420 2	0.00027 4	1.78925	HBA1
<u>2333</u>	M25079.1	0.00420 2	0.00420 2	0.00024 7	1.59503	HBB
<u>2334</u>	V00489	0.00420 2	0.00420 2	0.00026 8	1.54947	
<u>2335</u>	BC005931.1	0.00420 2	0.00420 2	0.00029 6	1.48707	HBA2
<u>2336</u>	T50399	0.00420 2	0.00420 2	0.00027 5	1.43533	HBA2
<u>2337</u>	NM_024567.1	0.00420 2	0.00420 2	0.00220 6	1.42146	FLJ21616
<u>2338</u>	AF105974.1	0.00420 2	0.00420 2	0.00108 6	1.3896	HBA1
<u>2339</u>	NM_000558.2	0.00420 2	0.00420 2	0.00070 7	1.3348	HBA1
<u>2340</u>	AI133353	0.00420 2	0.00420 2	0.00089 7	1.29746	HBG2
<u>2341</u>	AF059180	0.00420 2	0.00420 2	0.00030 9	1.29355	
<u>2342</u>	AF349114.1	0.00420 2	0.00420 2	0.00016 3	1.27511	HBB
<u>2343</u>	BE547674	0.00420 2	0.00420 2	0.00294 7	0.63661 9	
<u>2344</u>	NM_012452.1	0.00420 2	0.00420 2	0.00054 1	0.57081 8	TNFRSF13B
<u>2345</u>	AA314406	0.00420 2	0.00140 1	0.00201 3	0.52063 1	TRAP95
<u>2346</u>	NM_015909.1	0.00420 2	0.00140 1	0.00039 8	0.50173 3	NAG
<u>2347</u>	NM_006868.1	0.00420 2	0.00420 2	0.00271 1	0.49862	RAB31
<u>2348</u>	BC000305.1	0.00420 2	0.00420 2	0.00692 1	0.47573 3	CASP6
<u>2349</u>	L77566	0.00420 2	0.00140 1	0.00033 3	0.44629 3	DGSI
<u>2350</u>	BF971416	0.00420 2	0.00420 2	0.00240 5	0.41074 2	DKFZP586N072 1
<u>2351</u>	BE879367	0.00420 2	0.00420 2	0.00056 4	0.38248 4	AKAP2
<u>2352</u>	NM_001640.2	0.00420 2	0.00140 1	0.00409 1	0.36631	APEH
<u>2353</u>	BC001808.1	0.00420 2	0.00420 2	0.01299 7	0.34704 3	NM23-H6
<u>2354</u>	AL049539	0.00420 2	0.00420 2	0.01073 8	0.2822	KIAA0255
<u>2355</u>	BC000580.1	0.00420 2	0.00140 1	0.01416 6	0.27065 8	PH-4
<u>2356</u>	NM_012151.2	0.00420 2	0.00140 1	0.00068 5	0.26766 4	F8A
<u>2357</u>	BC004423.1	0.00420 2	0.00420 2	0.01219 4	0.24914 4	TNRC5
<u>2358</u>	NM_004890.1	0.00420 2	0.00140 1	0.01033 2	0.13443 9	SPAG7

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<u>2359</u>	AB029040	0.00420 2	0.00420 2	0.01081 9	-0.14172	KIAA1117
<u>2360</u>	NM_025160.1	0.00420 2	0.00140 1	0.00498 6	-0.21141	FLJ21016
<u>2361</u>	AW162015	0.00420 2	0.00420 2	0.30122 4	-0.24766	ZNF143
<u>2362</u>	NM_005574.2	0.00420 2	0.00420 2	0.10759 5	-0.24939	LMO2
<u>2363</u>	NM_014670.1	0.00420 2	0.00420 2	0.02553 4	-0.27225	BZW1
<u>2364</u>	AL117643.1	0.00420 2	0.00420 2	0.04649 5	-0.27766	
<u>2365</u>	AA628948	0.00420 2	0.00140 1	0.00031 9	-0.28951	ADSS
<u>2366</u>	AF251062.1	0.00420 2	0.00140 1	0.00043 5	-0.30924	LOC84549
<u>2367</u>	AL564683	0.00420 2	0.00420 2	0.01825 8	-0.44633	CEBPB
<u>2368</u>	NM_014999.1	0.00420 2	0.00420 2	0.00102 1	-0.47304	RAB21
<u>2369</u>	NM_017723.1	0.00420 2	0.00420 2	0.02759	-0.49548	FLJ20245
<u>2370</u>	NM_003264.1	0.00420 2	0.00420 2	0.00259 2	-0.49551	TLR2
<u>2371</u>	AF062347.1	0.00420 2	0.00420 2	0.00529	-0.51432	ZNF216
<u>2372</u>	NM_004556.1	0.00420 2	0.00420 2	0.00113 4	-0.53489	NFKBIE
<u>2373</u>	U92014.1	0.00420 2	0.00420 2	0.00306 4	-0.59511	
<u>2374</u>	NM_014778.1	0.00420 2	0.00420 2	0.00110 6	-0.65156	KIAA0410
<u>2375</u>	NM_015384.1	0.00420 2	0.00420 2	0.00294 3	-0.68193	IDN3
<u>2376</u>	AK022513.1	0.00420 2	0.00420 2	0.00132 6	-0.68416	DUSP10
<u>2377</u>	NM_003246.1	0.00420 2	0.00140 1	0.00016 2	-1.44745	THBS1
<u>2378</u>	AI812030	0.00420 2	0.00140 1	7.42E-05	-1.51098	THBS1
<u>2379</u>	NM_000559.1	0.03571 4	0.03524 7	0.00620 2	1.93991	HBG1
<u>2380</u>	NM_000184.1	0.03571 4	0.04225	0.00916 4	1.67513	HBG2
<u>2381</u>	NM_005564.1	0.03571 4	0.04225	0.01081 4	1.03322	LCN2
<u>2382</u>	AF274863.1	0.03571 4	0.00747	0.00771 9	0.95286 8	SEC31B-1
<u>2383</u>	NM_002288.2	0.03571 4	0.01540 6	0.01068 9	0.83431 3	LAIR2
<u>2384</u>	M87789.1	0.03571 4	0.04225	0.05851 8	0.79032	IGHG3
<u>2385</u>	NM_005764.1	0.03571 4	0.04225	0.05367 9	0.78914 7	DD96

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<u>2386</u>	AK000168.1	0.03571 4	0.04225	0.03817 6	0.76376 6	KIAA1919
<u>2387</u>	NM_020037.1	0.03571 4	0.03524 7	0.06137 9	0.74614 3	ABCC3
<u>2388</u>	AF103529.1	0.03571 4	0.03524 7	0.01528 4	0.73626 8	
<u>2389</u>	AV698647	0.03571 4	0.03524 7	0.01741 1	0.61613 7	IGLJ3
<u>2390</u>	A1357539	0.03571 4	0.04225	0.00558	0.60184 3	MGC4126
<u>2391</u>	NM_015935.1	0.03571 4	0.03524 7	0.02168 3	0.59381 8	CGI-01
<u>2392</u>	D38535	0.03571 4	0.04225	0.01602 5	0.57116 8	ITIH4
<u>2393</u>	AA723370	0.03571 4	0.04225	0.03991 7	0.57032 5	LOC51011
<u>2394</u>	AF227968.1	0.03571 4	0.00747	0.00530 8	0.56651 6	SH2B
<u>2395</u>	X12530.1	0.03571 4	0.04225	0.05633 5	0.55917 2	MS4A1
<u>2396</u>	A1348935	0.03571 4	0.03524 7	0.01412 9	0.54677 3	CALR
<u>2397</u>	NM_003422.1	0.03571 4	0.04225	0.00673 7	0.53681 5	ZNF42
<u>2398</u>	NM_015559.1	0.03571 4	0.04225	0.02879 5	0.53631 6	SETBP1
<u>2399</u>	NM_013378.1	0.03571 4	0.03524 7	0.00519 1	0.53256 4	VPREB3
<u>2400</u>	NM_004912.1	0.03571 4	0.01540 6	0.00303 7	0.52082	CCM1
<u>2401</u>	NM_006230.1	0.03571 4	0.01540 6	0.00747 1	0.51797 9	POLD2
<u>2402</u>	NM_006235.1	0.03571 4	0.03524 7	0.02172 6	0.51526 3	POU2AF1
<u>2403</u>	AL037557	0.03571 4	0.00747	0.00278 6	0.51172 4	POLR2I
<u>2404</u>	NM_014703.1	0.03571 4	0.00747	0.00670 9	0.4938	KIAA0800
<u>2405</u>	NM_015670.1	0.03571 4	0.03524 7	0.04570 8	0.46415 6	SEN3
<u>2406</u>	AA643304	0.03571 4	0.01540 6	0.00471 2	0.45969 4	
<u>2407</u>	A1948503	0.03571 4	0.04225	0.01796 4	0.45625	ABCC4
<u>2408</u>	BC002807.1	0.03571 4	0.04225	0.10075 9	0.45568 3	MS4A1
<u>2409</u>	AF123539.1	0.03571 4	0.03524 7	0.02828 6	0.45460 3	HTCD37
<u>2410</u>	AA149644	0.03571 4	0.00747	0.02413	0.45008 2	JAM3
<u>2411</u>	BC000585.1	0.03571 4	0.04225	0.03311 3	0.44368	SLC21A11
<u>2412</u>	AB044806.1	0.03571 4	0.04225	0.00776 6	0.43398 5	KCNH2

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<u>2413</u>	U37025	0.03571 4	0.03524 7	0.04697 1	0.42721 3	SULT1A1
<u>2414</u>	NM_020166.2	0.03571 4	0.03524 7	0.00631 8	0.42379 8	MCCC1
<u>2415</u>	NM_002876.1	0.03571 4	0.03524 7	0.02664 4	0.41486 7	RAD51C
<u>2416</u>	NM_002387.1	0.03571 4	0.03524 7	0.01092	0.40948 1	MCC
<u>2417</u>	NM_005816.1	0.03571 4	0.04225	0.10305 1	0.40734 8	TACTILE
<u>2418</u>	H95263	0.03571 4	0.03524 7	0.06911 3	0.40676 6	
<u>2419</u>	NM_003146.1	0.03571 4	0.03524 7	0.00314 6	0.40530 9	SSRP1
<u>2420</u>	NM_003550.1	0.03571 4	0.03524 7	0.05410 5	0.40385 1	MAD1L1
<u>2421</u>	AK022494.1	0.03571 4	0.00747	0.00118 9	0.39707 3	RAB3GAP
<u>2422</u>	NM_006400.2	0.03571 4	0.03524 7	0.02107 2	0.39629 7	DCTN2
<u>2423</u>	NM_006012.1	0.03571 4	0.03524 7	0.01524 1	0.39477 9	CLPP
<u>2424</u>	NM_014921.1	0.03571 4	0.03524 7	0.01446 3	0.39430 8	LEC2
<u>2425</u>	NM_025056.1	0.03571 4	0.00747	0.01912	0.39373 9	FLJ23185
<u>2426</u>	NM_003573.1	0.03571 4	0.04225	0.02605 3	0.39333 7	LTBP4
<u>2427</u>	NM_000132.2	0.03571 4	0.03524 7	0.00529 2	0.39244 2	F8
<u>2428</u>	AF031824.1	0.03571 4	0.03524 7	0.19024 3	0.38912 9	CST7
<u>2429</u>	NM_001841.1	0.03571 4	0.03524 7	0.07115	0.38706 7	CNR2
<u>2430</u>	NM_018391.1	0.03571 4	0.03524 7	0.13858 4	0.38698 2	FLJ23277
<u>2431</u>	U79248.1	0.03571 4	0.00747	0.00747 5	0.38641 9	
<u>2432</u>	NM_024332.1	0.03571 4	0.04225	0.03915 4	0.38619 8	C6.1A
<u>2433</u>	BF510692	0.03571 4	0.04225	0.04678 2	0.38532 4	PAX5
<u>2434</u>	AA243774	0.03571 4	0.03524 7	0.05045 6	0.38163 1	MMP24
<u>2435</u>	AL121964	0.03571 4	0.03524 7	0.10768 1	0.37375 9	MAP3K7
<u>2436</u>	L25275.1	0.03571 4	0.03524 7	0.02068 4	0.37297 1	SULT1A3
<u>2437</u>	AB018289.1	0.03571 4	0.03524 7	0.00228 6	0.37263	KIAA0746
<u>2438</u>	NM_000294.1	0.03571 4	0.03524 7	0.01143 2	0.36769 3	PHKG2
<u>2439</u>	BC001906.1	0.03571 4	0.03524 7	0.10794 7	0.36689 9	MTX1

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<u>2440</u>	NM_000651.1	0.03571 4	0.04225	0.04795 3	0.36547 1	CR1
<u>2441</u>	NM_001667.1	0.03571 4	0.00747	0.00966 1	0.36210 5	ARL2
<u>2442</u>	AI133727	0.03571 4	0.00747	0.01835 4	0.35888 4	ZAP
<u>2443</u>	BC002873.1	0.03571 4	0.03524 7	0.04871 1	0.35805 2	DKFZP564J0123
<u>2444</u>	NM_004178.2	0.03571 4	0.03524 7	0.00731 3	0.35645 9	TARBP2
<u>2445</u>	BG532929	0.03571 4	0.03524 7	0.03721 5	0.35625 4	SSB
<u>2446</u>	NM_018094.1	0.03571 4	0.03524 7	0.01430 2	0.35131 4	GSPT2
<u>2447</u>	AC004531	0.03571 4	0.00747	0.01714	0.35044 5	DDX28
<u>2448</u>	NM_001981.1	0.03571 4	0.03524 7	0.01077 6	0.34705 1	EPS15
<u>2449</u>	AB020689.1	0.03571 4	0.03524 7	0.02459 4	0.34625 3	KIAA0882
<u>2450</u>	NM_001055.1	0.03571 4	0.03524 7	0.05641 6	0.34493 7	SULT1A1
<u>2451</u>	NM_022067.1	0.03571 4	0.03524 7	0.00133 2	0.33771 3	FLJ12707
<u>2452</u>	NM_000195.1	0.03571 4	0.00747	0.01415 6	0.3312	HPS1
<u>2453</u>	NM_022914.1	0.03571 4	0.00747	0.16773 5	0.33108 2	24432
<u>2454</u>	NM_003627.1	0.03571 4	0.03524 7	0.06275 9	0.33037 1	POV1
<u>2455</u>	NM_022060.1	0.03571 4	0.03524 7	0.01071 7	0.32812 2	FLJ12816
<u>2456</u>	BF446180	0.03571 4	0.03524 7	0.02537	0.32634 7	PDCD2
<u>2457</u>	U28169.1	0.03571 4	0.03524 7	0.0891	0.32621 8	SULT1A2
<u>2458</u>	AF316873.1	0.03571 4	0.03524 7	0.02272 7	0.3257	PINK1
<u>2459</u>	NM_017615.1	0.03571 4	0.03524 7	0.08771 7	0.32505 6	FLJ20003
<u>2460</u>	NM_015853.1	0.03571 4	0.03524 7	0.02153 7	0.32108 9	LOC51035
<u>2461</u>	NM_018449.1	0.03571 4	0.03524 7	0.01461	0.31847 5	UBAP2
<u>2462</u>	NM_007056.1	0.03571 4	0.03524 7	0.01382 7	0.31808 6	SWAP2
<u>2463</u>	AV702994	0.03571 4	0.03524 7	0.01076 6	0.31613 8	LOC51668
<u>2464</u>	AK021884.1	0.03571 4	0.04225	0.01686 2	0.31587 9	NPEPPS
<u>2465</u>	U64898.1	0.03571 4	0.03524 7	0.01270 5	0.30944 6	NRD1
<u>2466</u>	AI431902	0.03571 4	0.03524 7	0.02616 3	0.30732 1	FLJ13491

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<u>2467</u>	NM_003689.1	0.03571 4	0.04225	0.03366	0.30628 1	AKR7A2
<u>2468</u>	BE791629	0.03571 4	0.00747	0.03952 2	0.30482 1	CGTHBA
<u>2469</u>	NM_016194.1	0.03571 4	0.03524 7	0.06024 9	0.30347 4	GNB5
<u>2470</u>	NM_014965.1	0.03571 4	0.03524 7	0.01354 7	0.29804 2	KIAA1042
<u>2471</u>	NM_003363.1	0.03571 4	0.03524 7	0.01839 3	0.29523 9	USP4
<u>2472</u>	U88964	0.03571 4	0.03524 7	0.01934 9	0.29442 7	ISG20
<u>2473</u>	BC001782.1	0.03571 4	0.03524 7	0.05902 6	0.29315 6	GAS2L1
<u>2474</u>	BC004361.1	0.03571 4	0.04225	0.08453 8	0.29250 9	PSCD2
<u>2475</u>	NM_017840.1	0.03571 4	0.03524 7	0.00392 9	0.29047 2	MRPL16
<u>2476</u>	NM_006321.1	0.03571 4	0.01540 6	0.00668 8	0.28872 3	ARIH2
<u>2477</u>	AI341234	0.03571 4	0.03524 7	0.00735 6	0.28469 9	CORO1B
<u>2478</u>	N20923	0.03571 4	0.03524 7	0.02027 1	0.28055 2	FYN
<u>2479</u>	L42531.1	0.03571 4	0.03524 7	0.00855 4	0.28002 3	
<u>2480</u>	AK000818.1	0.03571 4	0.03524 7	0.02226	0.27769 5	FLJ20811
<u>2481</u>	NM_000633.1	0.03571 4	0.03524 7	0.04463 9	0.27689 7	BCL2
<u>2482</u>	BE551347	0.03571 4	0.03524 7	0.20900 3	0.27640 6	FLJ13052
<u>2483</u>	AK000161.1	0.03571 4	0.04225	0.01675 2	0.27610 3	FLJ20154
<u>2484</u>	AI798908	0.03571 4	0.04225	0.01596 9	0.27492 1	KIAA0226
<u>2485</u>	NM_005111.1	0.03571 4	0.03524 7	0.01405	0.27373 2	CRYZL1
<u>2486</u>	NM_024551.1	0.03571 4	0.03524 7	0.00372	0.27268 4	FLJ21432
<u>2487</u>	BC006214.1	0.03571 4	0.00747	0.00624 4	0.26870 4	IRO039700
<u>2488</u>	AI123527	0.03571 4	0.04225	0.10539 2	0.26834 9	KIAA0092
<u>2489</u>	NM_004379.1	0.03571 4	0.03524 7	0.04722 9	0.26779 6	CREB1
<u>2490</u>	AA643304	0.03571 4	0.03524 7	0.03967 8	0.25820 1	
<u>2491</u>	NM_013417.1	0.03571 4	0.03524 7	0.04708 7	0.25773 8	IARS
<u>2492</u>	AK025432.1	0.03571 4	0.03524 7	0.05187 1	0.25745 6	KIAA0564
<u>2493</u>	AB028960	0.03571 4	0.04225	0.04094 2	0.25482 7	KIAA1037

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<u>2494</u>	NM_000048.1	0.03571 4	0.04225	0.03893 1	0.25444 7	ASL
<u>2495</u>	NM_002808.1	0.03571 4	0.03524 7	0.02396 6	0.25012 9	PSMD2
<u>2496</u>	NM_001054.1	0.03571 4	0.03524 7	0.06259 8	0.24869 6	SULT1A2
<u>2497</u>	NM_005428.2	0.03571 4	0.03524 7	0.00718 5	0.24843 9	VAV1
<u>2498</u>	NM_022758.1	0.03571 4	0.04225	0.01148 9	0.24640 1	FLJ22195
<u>2499</u>	AY009128.1	0.03571 4	0.03524 7	0.08493 8	0.24625 7	NIFU
<u>2500</u>	AB017004.1	0.03571 4	0.03524 7	0.07956 7	0.24495 4	PMS2L8
<u>2501</u>	NM_000249.1	0.03571 4	0.04225	0.02127 4	0.24344 1	MLH1
<u>2502</u>	U51007.1	0.03571 4	0.03524 7	0.04275 3	0.24222 3	
<u>2503</u>	BC002640.1	0.03571 4	0.03524 7	0.07475 1	0.24060 3	
<u>2504</u>	NM_016284.1	0.03571 4	0.00747	0.00192 9	0.24007 6	KIAA1007
<u>2505</u>	NM_002414.1	0.03571 4	0.03524 7	0.06399 8	0.23901 3	MIC2
<u>2506</u>	BC000212.1	0.03571 4	0.03524 7	0.02105 2	0.23757 7	GTF3C2
<u>2507</u>	NM_004398.2	0.03571 4	0.03524 7	0.04065 6	0.23525 2	DDX10
<u>2508</u>	NM_024713.1	0.03571 4	0.03524 7	0.04888 7	0.23492 7	FLJ22557
<u>2509</u>	NM_002810.1	0.03571 4	0.03524 7	0.03855 8	0.23459 3	PSMD4
<u>2510</u>	NM_030580.1	0.03571 4	0.03524 7	0.03126 3	0.23346 6	MGC10520
<u>2511</u>	AB007896.1	0.03571 4	0.03524 7	0.21181 6	0.23156 3	KIAA0436
<u>2512</u>	NM_003954.1	0.03571 4	0.04225	0.05191 6	0.23086 2	MAP3K14
<u>2513</u>	NM_025207.1	0.03571 4	0.03524 7	0.02082 3	0.23001 5	PP591
<u>2514</u>	NM_016323.1	0.03571 4	0.03524 7	0.05139 3	0.22876 4	LOC51191
<u>2515</u>	NM_016069.1	0.03571 4	0.04225	0.13276 6	0.22361 8	Magmas
<u>2516</u>	NM_013349.1	0.03571 4	0.03524 7	0.02874 8	0.22307 3	SPUF
<u>2517</u>	NM_000884.1	0.03571 4	0.03524 7	0.06434 7	0.22242 1	IMPDH2
<u>2518</u>	BG167570	0.03571 4	0.04225	0.10824 3	0.21965 2	DKFZp762N1910
<u>2519</u>	NM_004551.1	0.03571 4	0.00747	0.06025	0.21742 7	NDUFS3
<u>2520</u>	BG231932	0.03571 4	0.04225	0.07964 9	0.21044 7	CLN2

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<u>2521</u>	NM_017851.1	0.03571 4	0.03524 7	0.03630 8	0.20995 6	FLJ20509
<u>2522</u>	NM_006519.1	0.03571 4	0.03524 7	0.03299 1	0.20238 7	TCTEL1
<u>2523</u>	AF032900.1	0.03571 4	0.03524 7	0.17454 9	0.20073 9	COQ7
<u>2524</u>	AL535380	0.03571 4	0.03524 7	0.26520 5	0.19807 3	BTG1
<u>2525</u>	AW118862	0.03571 4	0.03524 7	0.02173	0.19375 3	RREB1
<u>2526</u>	NM_000382.1	0.03571 4	0.03524 7	0.27948	0.19350 9	ALDH3A2
<u>2527</u>	NM_024419.1	0.03571 4	0.03524 7	0.16488 3	0.19062 3	PGS1
<u>2528</u>	NM_003904.1	0.03571 4	0.03524 7	0.24567 6	0.19042 2	ZNF259
<u>2529</u>	AI928526	0.03571 4	0.00747	0.03686 1	0.18562 4	JTV1
<u>2530</u>	NM_024581.1	0.03571 4	0.03524 7	0.23086 7	0.18532 3	FLJ13942
<u>2531</u>	AF085357.1	0.03571 4	0.03524 7	0.11017 5	0.18496 5	FLOT1
<u>2532</u>	NM_004475.1	0.03571 4	0.03524 7	0.07264 2	0.18048 3	FLOT2
<u>2533</u>	AF334103.1	0.03571 4	0.00747	0.00966 4	0.17511	GU2
<u>2534</u>	NM_017829.1	0.03571 4	0.03524 7	0.11020 7	0.17451 5	CECR5
<u>2535</u>	NM_004214.3	0.03571 4	0.04225	0.01683 5	0.15790 2	FIBP
<u>2536</u>	NM_017704.1	0.03571 4	0.04225	0.16159	0.15767 2	FLJ20189
<u>2537</u>	NM_003592.1	0.03571 4	0.03524 7	0.03865 2	0.14624 1	CUL1
<u>2538</u>	AI537887	0.03571 4	0.03524 7	0.46737 5	0.13935 5	EPB72
<u>2539</u>	NM_023935.1	0.03571 4	0.03524 7	0.04911 9	0.12530 5	C20orf116
<u>2540</u>	BG398414	0.03571 4	0.03524 7	0.28685 6	0.12308 5	RPA1
<u>2541</u>	NM_016243.1	0.03571 4	0.03524 7	0.27999 5	0.12189 4	LOC51706
<u>2542</u>	NM_012199.1	0.03571 4	0.03524 7	0.09324 1	0.11854 7	EIF2C1
<u>2543</u>	AK024029.1	0.03571 4	0.04225	0.45039 3	0.11646	MAP-1
<u>2544</u>	NM_004848.1	0.03571 4	0.03524 7	0.48649 2	0.11351 6	ICB-1
<u>2545</u>	AF144638.1	0.03571 4	0.03524 7	0.25557 1	0.10089	SGPL1
<u>2546</u>	D86062.1	0.03571 4	0.03524 7	0.53239 8	0.08441 7	C21orf33
<u>2547</u>	NM_000655.2	0.03571 4	0.03524 7	0.53574 5	0.08116 7	SELL

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<u>2548</u>	NM_018643.1	0.03571 4	0.03524 7	0.87077 5	0.05739 9	TREM1
<u>2549</u>	NM_018326.1	0.03571 4	0.03524 7	0.92937 5	0.03504 8	HIMAP4
<u>2550</u>	NM_005371.2	0.03571 4	0.03524 7	0.87673 7	0.02512 7	METTL1
<u>2551</u>	NM_007002.1	0.03571 4	0.03524 7	0.91154 1	0.01042 2	ADRM1
<u>2552</u>	NM_004723.1	0.03571 4	0.03524 7	0.97568 5	-0.00562	ARHGEF2
<u>2553</u>	U31501	0.03571 4	0.03524 7	0.72454 9	-0.0658	FXR2
<u>2554</u>	NM_005338.3	0.03571 4	0.04225	0.12691 1	-0.0661	HIP1
<u>2555</u>	AB006589.1	0.03571 4	0.03524 7	0.00542	-0.10655	ESR2
<u>2556</u>	AA868754	0.03571 4	0.03524 7	0.30451 9	-0.10746	KIAA0650
<u>2557</u>	AU144792	0.03571 4	0.03524 7	0.00862 3	-0.11362	
<u>2558</u>	AF320999.1	0.03571 4	0.03524 7	0.28909 6	-0.11449	RTN4
<u>2559</u>	NM_013229.1	0.03571 4	0.03524 7	0.52918 1	-0.13735	APAF1
<u>2560</u>	NM_018690.1	0.03571 4	0.04225	0.26114 6	-0.14482	APOB48R
<u>2561</u>	D42055.1	0.03571 4	0.04225	0.00797 8	-0.14841	NEDD4
<u>2562</u>	BF968633	0.03571 4	0.03524 7	0.13500 3	-0.14873	RNF4
<u>2563</u>	AK026678.1	0.03571 4	0.03524 7	0.00833	-0.15056	STAG2
<u>2564</u>	NM_014671.1	0.03571 4	0.03524 7	0.39297 9	-0.15386	KIAA0010
<u>2565</u>	NM_030979.1	0.03571 4	0.03524 7	0.08749 4	-0.15652	PABPC3
<u>2566</u>	BG429214	0.03571 4	0.03524 7	0.27351 9	-0.15766	
<u>2567</u>	NM_006892.1	0.03571 4	0.03524 7	0.00192 2	-0.15828	DNMT3B
<u>2568</u>	NM_018975.1	0.03571 4	0.03524 7	0.04220 2	-0.16723	RAP1
<u>2569</u>	AL137335.1	0.03571 4	0.03524 7	0.30642 2	-0.17292	RANBP7
<u>2570</u>	NM_014016.1	0.03571 4	0.03524 7	0.39803 6	-0.17365	SACMIL
<u>2571</u>	NM_012198.1	0.03571 4	0.03524 7	0.39155 5	-0.17556	GCA
<u>2572</u>	NM_024586.1	0.03571 4	0.04225	0.01196 5	-0.19298	OSBPL9
<u>2573</u>	N64643	0.03571 4	0.03524 7	0.16498	-0.19313	KIAA0625
<u>2574</u>	NM_005951.1	0.03571 4	0.03524 7	0.15696 5	-0.1942	MT1H

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<u>2575</u>	NM_002264.1	0.03571 4	0.03524 7	0.13819 5	-0.1949	
<u>2576</u>	AF182415.1	0.03571 4	0.04225	0.32595 9	-0.19495	RBM8A
<u>2577</u>	BE674061	0.03571 4	0.03524 7	0.01503 6	-0.20133	PIN4
<u>2578</u>	NM_004973.2	0.03571 4	0.00747	0.10307 1	-0.20162	JMJ
<u>2579</u>	U58852.1	0.03571 4	0.03524 7	0.51050 8	-0.20606	NPAT
<u>2580</u>	NM_005565.2	0.03571 4	0.03524 7	0.03754 1	-0.2105	LCP2
<u>2581</u>	NM_004941.1	0.03571 4	0.03524 7	0.22918 9	-0.21215	DDX8
<u>2582</u>	U02297.1	0.03571 4	0.03524 7	0.25267 2	-0.21782	SELPLG
<u>2583</u>	NM_002940.1	0.03571 4	0.03524 7	0.11237 3	-0.22731	ABCE1
<u>2584</u>	AL550657	0.03571 4	0.03524 7	0.06940 3	-0.23303	BSG
<u>2585</u>	BG387770	0.03571 4	0.03524 7	0.03298 4	-0.2362	MGC32104
<u>2586</u>	AL050205.1	0.03571 4	0.04225	0.35207 8	-0.23748	LOC113251
<u>2587</u>	NM_016653.1	0.03571 4	0.03524 7	0.00338 7	-0.23765	ZAK
<u>2588</u>	AA742237	0.03571 4	0.03524 7	0.12093 5	-0.23853	BAT2
<u>2589</u>	NM_021183.1	0.03571 4	0.03524 7	0.06912 1	-0.24239	LOC57826
<u>2590</u>	AB014527.1	0.03571 4	0.03524 7	0.00563 6	-0.24315	CLASP2
<u>2591</u>	AF091086.1	0.03571 4	0.03524 7	0.12485 3	-0.24621	CL640
<u>2592</u>	NM_006748.1	0.03571 4	0.04225	0.14147 3	-0.24728	SLA
<u>2593</u>	NM_025238.1	0.03571 4	0.03524 7	0.04650 7	-0.24841	BTBD1
<u>2594</u>	NM_018638.2	0.03571 4	0.03524 7	0.07440 5	-0.24942	EKI1
<u>2595</u>	NM_002913.1	0.03571 4	0.04225	0.09219 7	-0.24967	
<u>2596</u>	NM_002863.1	0.03571 4	0.03524 7	0.03456 7	-0.25494	PYGL
<u>2597</u>	AF226044.1	0.03571 4	0.03524 7	0.02396 6	-0.25679	SNRK
<u>2598</u>	NM_016217.1	0.03571 4	0.03524 7	0.01673	-0.25733	LOC51696
<u>2599</u>	AF084943.1	0.03571 4	0.03524 7	0.02484 1	-0.26011	MINPP1
<u>2600</u>	N22548	0.03571 4	0.04225	0.03686	-0.26164	ROCK1
<u>2601</u>	AF033850.1	0.03571 4	0.03524 7	0.11053 2	-0.26338	PLD2

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<u>2602</u>	NM_014445.1	0.03571 4	0.00747	0.00705 8	-0.26858	SERP1
<u>2603</u>	NM_016196.1	0.03571 4	0.03524 7	0.01427 8	-0.27109	KIAA0682
<u>2604</u>	NM_012252.1	0.03571 4	0.03524 7	0.02062 5	-0.27124	TFEC
<u>2605</u>	W72082	0.03571 4	0.03524 7	0.18059 9	-0.27284	C1QR1
<u>2606</u>	NM_016166.1	0.03571 4	0.03524 7	0.07178 2	-0.27429	PIAS1
<u>2607</u>	NM_022470.1	0.03571 4	0.03524 7	0.07288 4	-0.27655	WIG1
<u>2608</u>	NM_030797.1	0.03571 4	0.03524 7	0.03919 7	-0.27728	DKFZP566A1524
<u>2609</u>	NM_002199.2	0.03571 4	0.03524 7	0.25065 6	-0.27789	IRF2
<u>2610</u>	BC003360.1	0.03571 4	0.03524 7	0.02171	-0.27851	DDX18
<u>2611</u>	NM_004504.2	0.03571 4	0.03524 7	0.02083 4	-0.27873	HRB
<u>2612</u>	NM_012072.2	0.03571 4	0.03524 7	0.11849 4	-0.27892	C1QR1
<u>2613</u>	NM_018230.1	0.03571 4	0.03524 7	0.07130 1	-0.28019	NUP133
<u>2614</u>	NM_002727.1	0.03571 4	0.04225	0.03855 9	-0.28438	PRG1
<u>2615</u>	BC005338.1	0.03571 4	0.03524 7	0.11406 2	-0.28524	CAPZA2
<u>2616</u>	U60521.1	0.03571 4	0.04225	0.06664 3	-0.29174	CASP9
<u>2617</u>	AW188198	0.03571 4	0.03524 7	0.00512 6	-0.29178	TNFAIP6
<u>2618</u>	BE908931	0.03571 4	0.03524 7	0.01700 9	-0.29572	
<u>2619</u>	U64661	0.03571 4	0.04225	0.03098 2	-0.29704	
<u>2620</u>	AL021395	0.03571 4	0.04225	0.02084	-0.29857	
<u>2621</u>	NM_015176.1	0.03571 4	0.03524 7	0.05968 8	-0.299	KIAA0483
<u>2622</u>	NM_002857.1	0.03571 4	0.04225	0.04761	-0.29944	PXF
<u>2623</u>	U70451.1	0.03571 4	0.03524 7	0.00345 8	-0.30169	MYD88
<u>2624</u>	NM_018042.1	0.03571 4	0.03524 7	0.02020 9	-0.30409	FLJ10260
<u>2625</u>	AL049265.1	0.03571 4	0.04225	0.13661 8	-0.30472	
<u>2626</u>	NM_024081.1	0.03571 4	0.03524 7	0.02026 7	-0.30513	TMG4
<u>2627</u>	AI796169	0.03571 4	0.03524 7	0.02395 9	-0.31104	GATA3
<u>2628</u>	AA160522	0.03571 4	0.03524 7	0.05604 4	-0.31114	UBE3A

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<u>2629</u>	AL136621.1	0.03571 4	0.04225	0.06859	-0.31538	ZNF198
<u>2630</u>	NM_003051.1	0.03571 4	0.03524 7	0.02877 6	-0.3171	SLC16A1
<u>2631</u>	AW572909	0.03571 4	0.03524 7	0.02702 5	-0.31713	KIAA0874
<u>2632</u>	NM_017782.1	0.03571 4	0.04225	0.01710 4	-0.32078	FLJ20360
<u>2633</u>	AK001821.1	0.03571 4	0.04225	0.01318 2	-0.32145	MGC4170
<u>2634</u>	AW001847	0.03571 4	0.03524 7	0.20419 5	-0.32259	APLP2
<u>2635</u>	BF196931	0.03571 4	0.04225	0.00370 6	-0.3226	ZFP95
<u>2636</u>	AJ223333.1	0.03571 4	0.03524 7	0.02359 3	-0.32279	DNMT2
<u>2637</u>	NM_005213.1	0.03571 4	0.04225	0.21630 5	-0.32285	CSTA
<u>2638</u>	AF142419.1	0.03571 4	0.04225	0.01377 2	-0.33425	QKI
<u>2639</u>	NM_020375.1	0.03571 4	0.03524 7	0.07666	-0.33473	C12orf5
<u>2640</u>	NM_021970.1	0.03571 4	0.04225	0.05498 7	-0.33505	MAP2K1IP1
<u>2641</u>	AK023816.1	0.03571 4	0.03524 7	0.13695 2	-0.34214	
<u>2642</u>	NM_012238.3	0.03571 4	0.00747	0.01830 8	-0.3438	SIRT1
<u>2643</u>	AF205218.1	0.03571 4	0.03524 7	0.03308 8	-0.34674	NS1-BP
<u>2644</u>	NM_001660.2	0.03571 4	0.03524 7	0.02038 7	-0.35015	ARF4
<u>2645</u>	NM_001196.1	0.03571 4	0.01540 6	0.02054 4	-0.35511	BID
<u>2646</u>	NM_002970.1	0.03571 4	0.03524 7	0.06420 1	-0.35676	SAT
<u>2647</u>	AC074331	0.03571 4	0.03524 7	0.01515	-0.35767	
<u>2648</u>	M75715.1	0.03571 4	0.03524 7	0.01080 2	-0.3577	ETF1
<u>2649</u>	NM_018657.2	0.03571 4	0.04225	0.02180 7	-0.3681	MYNN
<u>2650</u>	NM_003370.1	0.03571 4	0.03524 7	0.05614 3	-0.37617	VASP
<u>2651</u>	A1761561	0.03571 4	0.03524 7	0.08439 3	-0.37861	HK2
<u>2652</u>	NM_002657.2	0.03571 4	0.03524 7	0.04340 2	-0.39004	PLAGL2
<u>2653</u>	NM_004565.1	0.03571 4	0.03524 7	0.08621 2	-0.39025	PEX14
<u>2654</u>	AK023837.1	0.03571 4	0.04225	0.08336 6	-0.39056	KIAA1025
<u>2655</u>	AL117354	0.03571 4	0.00747	0.01191 6	-0.39754	LOC50999

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<u>2656</u>	NM_001356.2	0.03571 4	0.03524 7	0.02913 4	-0.41337	DDX3
<u>2657</u>	NM_018573.1	0.03571 4	0.01540 6	0.00529	-0.41757	PRO1068
<u>2658</u>	NM_030799.1	0.03571 4	0.03524 7	0.07523 5	-0.42088	SMAP-5
<u>2659</u>	AA524053	0.03571 4	0.04225	0.03136 1	-0.42442	
<u>2660</u>	NM_002748.1	0.03571 4	0.03524 7	0.02326 6	-0.42563	MAPK6
<u>2661</u>	NM_002053.1	0.03571 4	0.03524 7	0.05320 1	-0.43747	GBP1
<u>2662</u>	AB023227.1	0.03571 4	0.04225	0.00334 3	-0.43985	KIAA1010
<u>2663</u>	AW193511	0.03571 4	0.03524 7	0.01270 9	-0.44652	HIS1
<u>2664</u>	AW272611	0.03571 4	0.04225	0.02427 7	-0.44899	TMPO
<u>2665</u>	AI671747	0.03571 4	0.00747	0.02288	-0.45263	MISS
<u>2666</u>	AI688580	0.03571 4	0.03524 7	0.03591 8	-0.45484	SURB7
<u>2667</u>	NM_002502.1	0.03571 4	0.03524 7	0.10771 2	-0.45745	NFKB2
<u>2668</u>	NM_004267.1	0.03571 4	0.04225	0.03035 2	-0.47177	CHST2
<u>2669</u>	X15132.1	0.03571 4	0.03524 7	0.04145 2	-0.47259	SOD2
<u>2670</u>	NM_012093.1	0.03571 4	0.03524 7	0.01160 6	-0.47474	AK5
<u>2671</u>	D26067.1	0.03571 4	0.03524 7	0.00343 8	-0.47644	KIAA0033
<u>2672</u>	NM_001166.2	0.03571 4	0.04225	0.01525 2	-0.48334	BIRC2
<u>2673</u>	NM_016545.1	0.03571 4	0.03524 7	0.02982 6	-0.48723	IER5
<u>2674</u>	NM_021122.2	0.03571 4	0.03524 7	0.07088 2	-0.49855	FACL2
<u>2675</u>	NM_017936.1	0.03571 4	0.03524 7	0.00829 3	-0.5016	FLJ20707
<u>2676</u>	NM_000574.1	0.03571 4	0.03524 7	0.02274 3	-0.50532	DAF
<u>2677</u>	AL050144.1	0.03571 4	0.01540 6	0.00082 2	-0.52839	ZNF363
<u>2678</u>	NM_005346.2	0.03571 4	0.03524 7	0.10824	-0.5359	HSPA1B
<u>2679</u>	NM_022725.1	0.03571 4	0.03524 7	0.02381 4	-0.53779	FANCF
<u>2680</u>	AI348010	0.03571 4	0.03524 7	0.22611 6	-0.54348	
<u>2681</u>	AI927993	0.03571 4	0.03524 7	0.05406	-0.54478	OSBP
<u>2682</u>	BE327172	0.03571 4	0.03524 7	0.09131 7	-0.54925	JUN

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<u>2683</u>	AI741876	0.03571 4	0.00747	0.02518 2	-0.57505	
<u>2684</u>	NM_003107.1	0.03571 4	0.03524 7	0.07808 7	-0.59709	SOX4
<u>2685</u>	BE383139	0.03571 4	0.03524 7	0.00951	-0.60058	RARA
<u>2686</u>	NM_018398.1	0.03571 4	0.03524 7	0.01622 1	-0.603	CACNA2D3
<u>2687</u>	NM_000201.1	0.03571 4	0.03524 7	0.03691 5	-0.62554	ICAM1
<u>2688</u>	NM_002229.1	0.03571 4	0.03524 7	0.12980 2	-0.64436	JUNB
<u>2689</u>	NM_021960.1	0.03571 4	0.04225	0.02417 6	-0.66914	MCL1
<u>2690</u>	NM_016010.1	0.03571 4	0.00747	0.01568 4	-0.68307	LOC51101
<u>2691</u>	NM_004417.2	0.03571 4	0.03524 7	0.04337 7	-0.68458	DUSP1
<u>2692</u>	NM_025195.1	0.03571 4	0.03524 7	0.05588 2	-0.68638	C8FW
<u>2693</u>	NM_004418.2	0.03571 4	0.03524 7	0.30659 1	-0.68934	DUSP2
<u>2694</u>	AB017493.1	0.03571 4	0.01540 6	0.01022 4	-0.6982	COPEB
<u>2695</u>	AF064824.1	0.03571 4	0.03524 7	0.01007 1	-0.70109	RIPK2
<u>2696</u>	NM_005354.2	0.03571 4	0.03524 7	0.04394	-0.70667	JUND
<u>2697</u>	NM_006469.1	0.03571 4	0.03524 7	0.00645 3	-0.71493	NS1-BP
<u>2698</u>	NM_006290.1	0.03571 4	0.03524 7	0.15537 5	-0.73437	TNFAIP3
<u>2699</u>	AI339541	0.03571 4	0.03524 7	0.03983 8	-0.76402	JUND
<u>2700</u>	AF087853.1	0.03571 4	0.03524 7	0.07664 7	-0.77217	GADD45B
<u>2701</u>	AL031602	0.03571 4	0.03524 7	0.01515 8	-0.78504	
<u>2702</u>	BF575213	0.03571 4	0.03524 7	0.00714 4	-0.78651	
<u>2703</u>	M68956.1	0.03571 4	0.00747	0.00193 3	-0.79718	MARCKS
<u>2704</u>	NM_004907.1	0.03571 4	0.03524 7	0.00650 3	-0.81053	ETR101
<u>2705</u>	AW083357	0.03571 4	0.03524 7	0.00989 3	-0.81405	IL1RN
<u>2706</u>	AF153820.1	0.03571 4	0.03524 7	0.00440 3	-0.82757	KCNJ2
<u>2707</u>	AI608725	0.03571 4	0.03524 7	0.01011 9	-0.83319	ICAM1
<u>2708</u>	NM_000958.1	0.03571 4	0.01540 6	0.00311 2	-0.86354	PTGER4
<u>2709</u>	AA083483	0.03571 4	0.03524 7	0.01222 8	-0.88452	FTH1

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<u>2710</u>	NM_002664.1	0.03571 4	0.00747	0.00085 5	-0.88664	PLEK
<u>2711</u>	AL031602	0.03571 4	0.01540 6	0.00038	-0.88673	
<u>2712</u>	W27419	0.03571 4	0.01540 6	0.00036 1	-0.95575	
<u>2713</u>	NM_002852.1	0.03571 4	0.03524 7	0.00171 6	-0.97365	PTX3
<u>2714</u>	NM_001964.1	0.03571 4	0.03524 7	0.06828 7	-0.99045	EGR1
<u>2715</u>	AF078077.1	0.03571 4	0.03524 7	0.01705 8	-1.003	GADD45B
<u>2716</u>	NM_015714.1	0.03571 4	0.03524 7	0.21085 8	-1.05996	G0S2
<u>2717</u>	BC004490.1	0.03571 4	0.03524 7	0.06820 1	-1.06388	FOS
<u>2718</u>	AI738896	0.03571 4	0.03524 7	0.07152 6	-1.09453	TNFAIP3
<u>2719</u>	AW973834	0.03571 4	0.03524 7	0.03081 7	-1.09468	
<u>2720</u>	NM_004895.1	0.03571 4	0.03524 7	0.00499 2	-1.10724	CIAS1
<u>2721</u>	U08839.1	0.03571 4	0.03524 7	0.03096 8	-1.1245	PLAUR
<u>2722</u>	BC005020.1	0.03571 4	0.03524 7	0.02289 3	-1.13801	PPIF
<u>2723</u>	NM_005627.1	0.03571 4	0.03524 7	0.01083 4	-1.16132	SGK
<u>2724</u>	NM_015675.1	0.03571 4	0.03524 7	0.02225 1	-1.16822	GADD45B
<u>2725</u>	AI433595	0.03571 4	0.01540 6	0.00239 5	-1.17663	PLEK
<u>2726</u>	NM_002135.1	0.03571 4	0.03524 7	0.00994 2	-1.19934	NR4A1
<u>2727</u>	NM_003407.1	0.03571 4	0.03524 7	0.0028	-1.30448	ZFP36
<u>2728</u>	NM_004233.1	0.03571 4	0.03524 7	0.04512 8	-1.33091	CD83
<u>2729</u>	NM_001432.1	0.03571 4	0.03524 7	0.00194 2	-1.33633	EREG
<u>2730</u>	NM_002228.2	0.03571 4	0.03524 7	0.00722 7	-1.34352	JUN
<u>2731</u>	NM_004049.1	0.03571 4	0.03524 7	0.00492 7	-1.41895	BCL2A1
<u>2732</u>	U83981	0.03571 4	0.03524 7	0.00580 6	-1.46885	PPP1R15A
<u>2733</u>	NM_006018.1	0.03571 4	0.03524 7	0.00209 4	-1.50671	HM74
<u>2734</u>	BG491844	0.03571 4	0.03524 7	0.01195 7	-1.61438	JUN
<u>2735</u>	BC002646.1	0.03571 4	0.03524 7	0.00243 8	-1.64136	JUN
<u>2736</u>	NM_000963.1	0.03571 4	0.03524 7	0.02577 2	-1.65759	PTGS2

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<u>2737</u>	AY029180.1	0.03571 4	0.03524 7	0.01108 2	-1.69399	PLAUR
<u>2738</u>	NM_014330.2	0.03571 4	0.03524 7	0.00324 5	-1.74665	PPP1R15A
<u>2739</u>	NM_003897.1	0.03571 4	0.03524 7	0.00298 1	-1.89968	IER3
<u>2740</u>	M57731.1	0.03571 4	0.03524 7	0.00181 1	-1.9703	CXCL2
<u>2741</u>	NM_000584.1	0.03571 4	0.03524 7	0.03074 7	-2.54298	IL8
<u>2742</u>	NM_000576.1	0.03571 4	0.03524 7	0.00099 2	-2.66025	IL1B
<u>2743</u>	M15330	0.03571 4	0.03524 7	0.00150 5	-2.71142	IL1B

It is appreciated that certain features of the invention, which are, for clarity, described in the context of separate embodiments, may also be provided in combination in a single embodiment. Conversely, various features of the invention, which are, for brevity, described in the context of a single embodiment, may also be provided separately or in any suitable subcombination.

Although the invention has been described in conjunction with specific embodiments thereof, it is evident that many alternatives, modifications and variations will be apparent to those skilled in the art. Accordingly, it is intended to embrace all such alternatives, modifications and variations that fall within the spirit and broad scope of the appended claims. All publications, patents, patent applications and sequences identified by a GenBank accession number mentioned in this specification are herein incorporated in their entirety by reference into the specification, to the same extent as if each individual publication, patent, patent application or sequence was specifically and individually indicated to be incorporated herein by reference. In addition, citation or identification of any reference in this application shall not be construed as an admission that such reference is available as prior art to the present invention.

ABSTRACT

Markers of multiple sclerosis and methods and kits utilizing same for diagnosing multiple sclerosis in an individual are provided.